Honeywell

Hyperion 1300g

General Purpose Handheld Linear Scanner

User's Guide

Disclaimer

Web Address: www.honeywellaidc.com

For patent information, refer to www.hsmpats.com.

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1 Getting Started

About This Manual

This User's Guide provides installation and programming instructions for the Hyperion 1300g. Product specifications, dimensions, warranty, and customer support information are also included.

Honeywell bar code scanners are factory programmed for the most common terminal and communications settings. If you need to change these settings, programming is accomplished by scanning the bar codes in this guide.

An asterisk (*) next to an option indicates the default setting.

Unpacking the Scanner

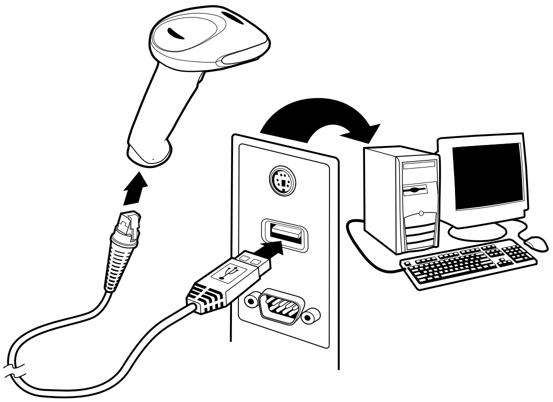
After you open the shipping carton containing the product, take the following steps:

- Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.
- Make sure the items in the carton match your order.
- Save the shipping container for later storage or shipping.

Connecting with USB

A scanner can be connected to the USB port of a computer. The scanner emulates the keyboard.

1. Connect the appropriate interface cable to the scanner first, then to the computer.



2. The scanner beeps.

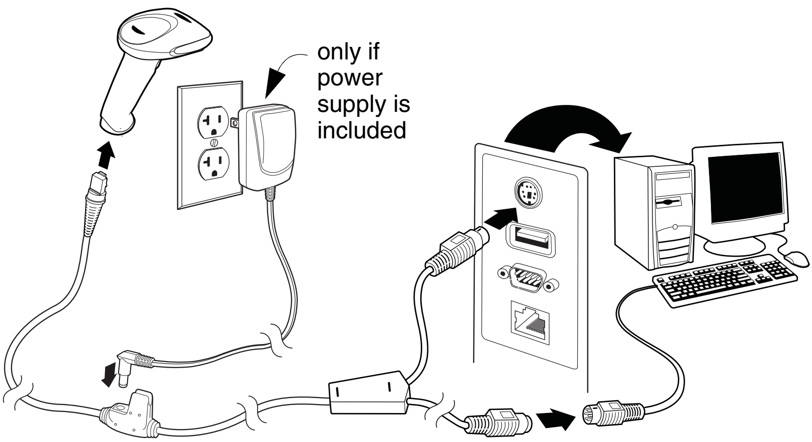
3. Verify the scanner operation by scanning a bar code from the Sample Symbols in the back of this manual.

For additional USB programming and technical information, refer to the Honeywell "USB Application Note," available at www.honeywellaidc.com.

Connecting with Keyboard Wedge

A scanner can be connected between the keyboard and PC as a "keyboard wedge," where the scanner provides data output that is similar to keyboard entries. The following is an example of a keyboard wedge connection:

1. Turn off power and disconnect the keyboard cables from the back of the terminal/computer.
2. Connect the appropriate interface cable to the scanner and to the terminal/computer.

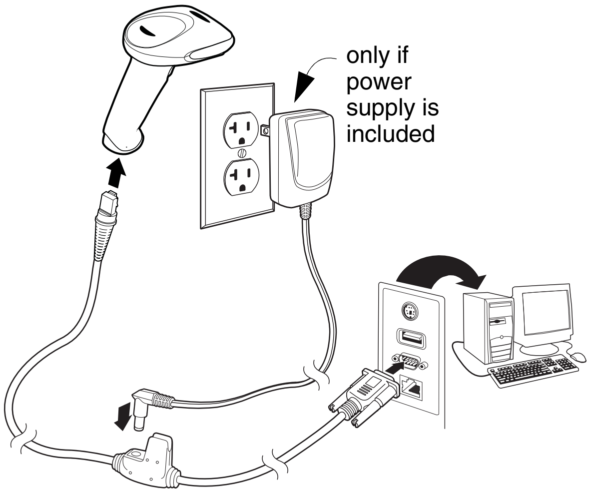


3. Turn the terminal/computer power back on. The scanner beeps.
4. Verify the scanner operation by scanning a bar code from the Sample Symbols in the back of this manual. The scanner beeps once.

The unit defaults to an IBM PC AT and compatibles keyboard wedge interface with a USA keyboard. A carriage return (CR) suffix is added to bar code data.

Connecting with RS-232 Serial Port

1. Turn off power to the terminal/computer.
2. Connect the appropriate interface cable to the scanner.

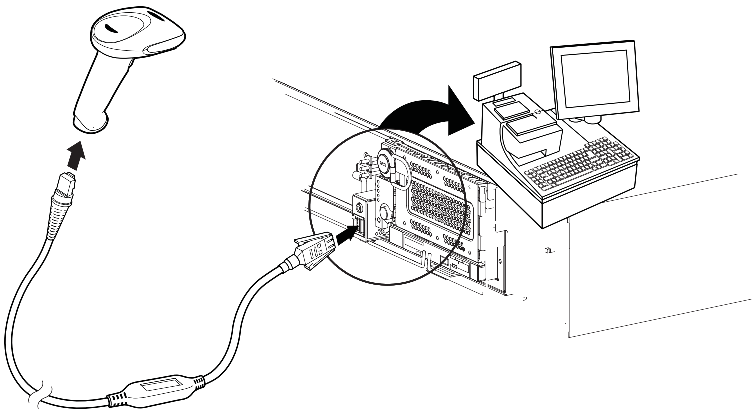


3. Plug the serial connector into the serial port on your computer. Tighten the two screws to secure the connector to the port.
4. Once the scanner has been completely connected, power up the computer.
5. This interface programs 38,400 baud, 8 data bits, no parity, and 1 stop bit.

Connecting with RS485

A scanner can be connected for an IBM POS terminal interface.

1. Connect the appropriate interface cable to the device, then to the computer.



2. Turn the terminal/computer power back on. The scanner beeps.

3. Verify the scanner operation by scanning a bar code from the Sample Symbols in the back of this manual. The scanner beeps once.

4. For further RS485 settings, refer to RS485 on page 2-2.

Reading Techniques

The scanner has a bright red aiming beam that corresponds to its horizontal field of view. The aiming beam should be centered horizontally over the bar code; it will not read if the aiming beam is in any other direction.

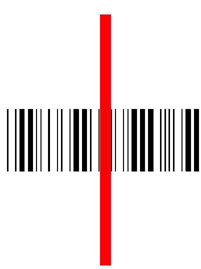
Good Technique



Bad Technique



Bad Technique



The best focus point for reading most code densities is about 5 inches (12.7 cm) from the unit. To read a single bar code or multiple bar codes (on a page or on an object), hold the scanner at an appropriate distance from the target, pull the trigger, and center the aiming beam on the bar code.

Menu Bar Code Security Settings

Honeywell scanners are programmed by scanning menu bar codes or by sending serial commands to the scanner. If you want to restrict the ability to scan menu codes, you can use the Menu Bar Code Security settings. Contact Technical Support (seeCustomer Support on page 12-1) for further information.

Setting Custom Defaults

You have the ability to create a set of menu commands as your own, custom defaults. To do so, scan the **Set Custom Defaults** bar code below before each menu command or sequence you want saved. If your command requires scanning numeric codes from the back cover, then a **Save** code, that entire sequence will be saved to your custom defaults. Scan the **Set Custom Defaults** code again before the next command you want saved to your custom defaults.

MNUCDF.

Set Custom Defaults

You may have a series of custom settings and want to correct a single setting. To do so, just scan the new setting to overwrite the old one. For example, if you had previously saved the setting for Beeper Volume at Low to your custom defaults, and decide you want the beeper volume set to High, just scan the **Set Custom Defaults** bar code, then scan the Beeper Volume High menu code. The rest of the custom defaults will remain, but the beeper volume setting will be updated.

Resetting the Custom Defaults

If you want the custom default settings restored to your scanner, scan the **Activate Custom Defaults** bar code below. This resets the scanner to the custom default settings. If there are no custom defaults, it will reset the scanner to the factory default settings. Any settings that have not been specified through the custom defaults will be defaulted to the factory default settings.

DEFALT.

Activate Custom Defaults

The Serial Programming Commands starting on page 9-1 lists the factory default settings for each of the commands (indicated by an asterisk (*) on the programming pages).

2 Programming the Interface

Introduction

This chapter describes how to program your system for the desired interface.

Programming the Interface - Plug and Play

Plug and Play bar codes provide instant scanner set up for commonly used interfaces.

Note: After you scan one of the codes, power cycle the host terminal to have the interface in effect.

Keyboard Wedge

If you want your system programmed for an IBM PC AT and compatibles keyboard wedge interface with a USA keyboard, scan the bar code below. Keyboard wedge is the default interface.

Note: The following bar code also programs a carriage return (CR) suffix.

PAP_AT.

IBM PC AT and Compatibles with CR Suffix

Laptop Direct Connect

For most laptops, scanning the **Laptop Direct Connect** bar code allows operation of the scanner in parallel with the integral keyboard. The following Laptop Direct Connect bar code selects terminal ID 03, programs a carriage return (CR) suffix and turns on Emulate External Keyboard (page 2-19).

PAPLTD.

Laptop Direct Connect with CR suffix

RS232 Serial Port

The **RS232 Interface** bar code is used when connecting to the serial port of a PC or terminal. The following **RS232 Interface** bar code also programs a carriage return (CR) and a line feed (LF) suffix, baud rate, and data format as indicated below.

Option	Setting
Baud Rate	38,400 bps
Data Format	8 data bits, no parity bit, 1 stop bit

PAP232.

RS232 Interface

RS485

Scan one of the following "Plug and Play" codes to program the scanner for an IBM POS terminal interface.

Note: After scanning one of these codes, you must power cycle the cash register.

PAPP5B.

IBM Port 5B Interface

PAP9B1.

IBM Port 9B HHBCR-1 Interface

PAPP17.

IBM Port 17 Interface

PAP9B2.

IBM Port 9B HHBCR-2 Interface

Each bar code above also programs the following suffixes for each symbology:

Symbology	Suffix	Symbology	Suffix
EAN 8	0C	Code 39	00 0A 0B
EAN 13	16	Interleaved 2 of 5	00 0D 0B
UPC A	0D	Code 128 *	00 0A 0B
UPC E	0A	Code 128 **	00 18 0B

* Suffixes programmed for Code 128 with IBM 4683 Port 5B, IBM 4683 Port 9B HHBCR-1, and IBM 4683 Port 17 Interfaces
**Suffixes programmed for Code 128 with IBM 4683 Port 9 HHBCR-2 Interface

OPOS Mode

The following bar code configures your scanner for OPOS (OLE for Retail Point of Sale) by modifying the following OPOS-related settings:

Option	Setting
Interface	RS232
Baud Rate	38400
RS232 Handshaking	Flow Control, No Timeout
	XON/XOFF Off
	ACK/NAK Off
Data Bits, Stop Bits, and Parity	8 Data, 1 Stop, Parity None
Prefix/Suffix	Clear All Prefixes and Suffixes
	Add Code ID and AIM ID Prefix
	Add CR Suffix
Intercharacter Delay	Off
Symbologies	Enable UPC-A with check digit and number system
	Enable UPC-E0 with check digit
	Enable EAN/JAN-8 with check digit
	Enable EAN/JAN-13 with check digit
	Enable Code 128
	Enable Code 39
	Enable OPOS with automatic disable off

PAPOPS.

OPOS Mode

USB IBM SurePos

Scan the following “Plug and Play” codes to program the scanner for an IBM SurePos (USB handheld scanner) interface.

Note: After scanning the code below, you must power cycle the cash register.

PAPSPH.

USB IBM SurePos (USB Handheld Scanner) Interface

PAPSPT.

USB IBM SurePos (USB Tabletop Scanner) Interface

The bar code above also programs the following suffixes for each symbology:

Symbology	Suffix	Symbology	Suffix
EAN 8	0C	Code 39	00 0A 0B
EAN 13	16	Interleaved 2 of 5	00 0D 0B
UPC A	0D	Code 128	00 18 0B
UPC E	0A	Code 39	00 0A 0B

USB PC or Macintosh Keyboard

Scan one of the following codes to program the scanner for USB PC Keyboard or USB Macintosh Keyboard. Scanning these codes also adds a CR and LF.

PAP124.

USB Keyboard (PC)

PAP125.

USB Keyboard (Mac)

USB HID POS

Scan the following code to program the scanner for USB HID POS bar code scanners.

PAP131.

USB HID POS Bar Code Scanner

USB Serial Commands

USB Serial Emulation

Scan the following code to program the scanner to emulate a regular RS232-based COM Port. If you are using a Microsoft® Windows® PC, you will need to download a driver from the Honeywell website (www.honeywellaidc.com). The driver will use the next available COM Port number. Apple® Macintosh computers recognize the scanner as a USB CDC class device and automatically uses a class driver.

Scanning this code also adds a CR and LF.

PAP130.

USB Serial Emulation

Note: No extra configuration (e.g., baud rate) is necessary.

CTS/RTS Emulation

USBCTS1.

CTS/RTS Emulation On

USBCTS0.

*** CTS/RTS Emulation Off**

ACK/NAK Mode

USBACK1.

ACK/NAK Mode On

USBACK0.

*** ACK/NAK Mode Off**

Honeywell Bioptic Aux Port Configuration

Scan the following Plug and Play code to program the scanner for a Honeywell bioptic scanner auxiliary port configuration. This bar code sets the baud rate to 38400 bps and the data format to 8 data bits, no parity, 1 stop bit. Character RTS/CTS with timeout and 232 ACK/NAK are also enabled.

PAPBIO.

Honeywell Bioptic Settings

Note: If you are having unexpected results with this programming code, scan the Resetting the Custom Defaults *bar code on page 1-5 first, then scan the programming code above.*

Datalogic™ Magellan® Bioptic Aux Port Configuration

Scan the following Plug and Play code to program the scanner for a Datalogic Magellan bioptic scanner auxiliary port configuration. This bar code sets the baud rate to 9600 bps and the data format to 8 data bits, no parity, 1 stop bit.

PAPMAG.

Datalogic Magellan Bioptic Settings

Note: If you are having unexpected results with this programming code, scan the Resetting the Custom Defaults bar code on page 1-5 first, then scan the programming code above.

Wincor Mode A

Scan the following Plug and Play code to program the scanner for Wincor Mode A mode. This bar code sets the baud rate to 9600 bps and the data format to 8 data bits, odd parity, 1 stop bit.

PAPWMA.

Wincor Mode A

Note: If you are having unexpected results with this programming code, scan the Resetting the Custom Defaults bar code on page 1-5 first, then scan the programming code above.

Keyboard Country Layout

Scan the appropriate country code below to program the keyboard layout for your country or language. As a general rule, the following characters are supported, but need special care for countries other than the United States:

@ | $ # { } [ ] = / ' \ < > ~

KBDCTY0.

*** United States**

KBDCTY35.

Albania

KBDCTY91.

Arabic

KBDCTY81.

Azeri (Cyrillic)

KBDCTY80.

Azeri (Latin)

KBDCTY82.

Belarus

KBDCTY1.

Belgium

KBDCTY33.

Bosnia

KBDCTY16.
Brazil

KBDCTY59.
Brazil (MS)

KBDCTY52.
Bulgaria (Cyrillic)

KBDCTY53.
Bulgaria (Latin)

KBDCTY54.
Canada (French legacy)

KBDCTY18.
Canada (French)

KBDCTY55.
Canada (Multilingual)

KBDCTY92.
China

KBDCTY32.
Croatia

KBDCTY15.
Czech

KBDCTY40.
Czech (Programmers)

KBDCTY39.
Czech (QWERTY)

KBDCTY38.
Czech (QWERTZ)

KBDCTY8.
Denmark

KBDCTY11.
Dutch (Netherlands)

KBDCTY41.
Estonia

KBDCTY83.
Faroese

KBDCTY2.
Finland

KBDCTY3.
France

KBDCTY84.
Gaelic

KBDCTY4.
Germany

KBDCTY17.
Greek

KBDCTY64.
Greek (220 Latin)

KBDCTY61.
Greek (220)

KBDCTY65.
Greek (319 Latin)

KBDCTY62.
Greek (319)

KBDCTY63.
Greek (Latin)

KBDCTY66.
Greek (MS)

KBDCTY60.
Greek (Polytonic)

KBDCTY12.
Hebrew

KBDCTY50.
Hungarian (101 key)

KBDCTY19.
Hungary

KBDCTY75.
Iceland

KBDCTY73.
Ireland

KBDCTY56.
Italian (142)

KBDCTY5.
Italy

KBDCTY28.
Japan ASCII

KBDCTY78.
Kazakh

KBDCTY93.
Korea

KBDCTY79.
Kyrgyz (Cyrillic)

KBDCTY14.
Latin America

KBDCTY42.
Latvia

KBDCTY43.
Latvia (QWERTY)

KBDCTY44.
Lithuania

KBDCTY45.
Lithuania (IBM)

KBDCTY34.
Macedonia

KBDCTY74.
Malta

KBDCTY86.
Mongolian (Cyrillic)

KBDCTY9.
Norway

KBDCTY20.
Poland

KBDCTY57.
Polish (214)

KBDCTY58.
Polish (Programmers)

KBDCTY13.
Portugal

KBDCTY25.
Romania

KBDCTY26.
Russia

KBDCTY67.
Russian (MS)

[

KBDCTY68.
Russian (Typewriter)

KBDCTY21.
SCS

KBDCTY37.
Serbia (Cyrillic)

KBDCTY36.
Serbia (Latin)

KBDCTY22.
Slovakia

KBDCTY49.
Slovakia (QWERTY)

KBDCTY48.
Slovakia (QWERTZ)

KBDCTY31.
Slovenia

KBDCTY10.
Spain

KBDCTY51.
Spanish variation

KBDCTY23.
Sweden

KBDCTY29.
Switzerland (French)

KBDCTY6.
Switzerland (German)

KBDCTY85.
Tatar

KBDCTY94.
Thailand

KBDCTY27.
Turkey F

KBDCTY24.
Turkey Q

KBDCTY76.
Ukrainian

KBDCTY7.
United Kingdom

KBDCTY89.
United Stated (Dvorak right)

KBDCTY88.
United States (Dvorak left)

KBDCTY87.
United States (Dvorak)

KBDCTY30.
United States (International)

KBDCTY77.
Uzbek (Cyrillic)

KBDCTY95.
Vietnam

Keyboard Mode Options

ALT Mode

If your bar code contains special characters from the extended ASCII chart for example, an e with an accent grave (è), you will use ALT Mode. (See Extended ASCII Characters on page A-6.)

Note: Scan the ALT mode bar code after scanning the appropriate Keyboard Country code.

If your keystrokes require the ALT key and 4 characters, scan the **4 Characters** bar code. The data is then output with the special character(s). Default = *Off*.

KBDALT0.

*** Off**

KBDALT7.

4 Characters

Keyboard Style

This programs keyboard styles, such as Caps Lock and Shift Lock. *Default = Regular.*

Regular is used when you normally have the Caps Lock key off.

KBDSTY0.

*** Regular**

Caps Lock is used when you normally have the Caps Lock key on.

KBDSTY1.

Caps Lock

Shift Lock is used when you normally have the Shift Lock key on (not common to U.S. keyboards).

KBDSTY2.

Shift Lock

Automatic Caps Lock is used if you change the Caps Lock key on and off. The software tracks and reflects if you have Caps Lock on or off (AT and PS/2 only). This selection can only be used with systems that have an LED, which notes the Caps Lock status.

KBDSTY6.

Automatic Caps Lock

Autocaps via NumLock bar code should be scanned in countries (e.g., Germany, France) where the Caps Lock key cannot be used to toggle Caps Lock. The NumLock option works similarly to the regular Auotcaps, but uses the NumLock key to retrieve the current state of the Caps Lock.

KBDSTY7.

Autocaps via NumLock

Emulate External Keyboard should be scanned if you do not have an external keyboard (IBM AT or equivalent).

KBDSTY5.

Emulate External Keyboard

Note: *After scanning the Emulate External Keyboard bar code, you must power cycle your computer.*

Keyboard Modifiers

This modifies special keyboard features, such as CTRL+ ASCII codes.

Control + X (Control + ASCII) Mode On: The scanner sends key combinations for ASCII control characters for values 00-1F. Windows is the preferred mode. All keyboard country codes are supported. DOS mode is a legacy

mode, and it does not support all keyboard country codes. New users should use the Windows mode. Refer to Keyboard Function Relationships, page 7-1 for CTRL+ X Values.

Windows Mode Prefix/Suffix Off: The scanner sends key combinations for ASCII control characters for values 00-1F (refer to ASCII Conversion Chart (Code Page 1252) on page A-3 for non-reprintable characters), but it does not translate any prefix or suffix information.

Default = Control + ASCII Off

KBDCAS2.

Windows Mode Control + X Mode On

KBDCAS0.

*** Control + X Mode Off**

KBDCAS1.

DOS Mode Control + X Mode On

KBDCAS3.

Windows Mode Prefix/Suffix Off

Numeric Keypad Mode: Sends numeric characters as if entered from a numeric keypad. *Default = Off*

KBDNPS1.

Numeric Keypad Mode On

KBDNPS0.

*** Numeric Keypad Mode Off**

Automatic Direct Connect Mode: This selection can be used if you have an IBM AT style terminal and the system is dropping characters. *Default = Off*

KBDADC1.

Automatic Direct Connect Mode On

KBDADC0.

*** Automatic Direct Connect Mode Off**

RS232 Modifiers

RS-232 Baud Rate

Baud Rate sends the data from the scanner to the terminal at the specified rate. The host terminal must be set for the same baud rate as the scanner.

Default = 38,400.

232BAD0.

300

232BAD1.

600

232BAD2.

1200

232BAD3.

2400

232BAD4.

4800

232BAD5.

9600

232BAD6.

19200

232BAD7.

*** 38400**

232BAD8.

57,600

232BAD9.

115,200

RS-232 Word Length: Data Bits, Stop Bits, and Parity

Data Bits sets the word length at 7 or 8 bits of data per character. If an application requires only ASCII Hex characters 0 through 7F decimal (text, digits, and punctuation), select 7 data bits. For applications which require use of the full ASCII set, select 8 data bits per character. *Default = 8.*

Stop Bits sets the stop bits at 1 or 2. *Default = 1.*

Parity provides a means of checking character bit patterns for validity. *Default = None.*

Note: *When using 7 Data, 1 Stop, Parity None, the host must insert at least a 1 bit delay between characters. If this is not done, a different RS232 Word Length format must be used.*

232WRD0.

7 Data, 1 Stop, Parity None
(see note above)

232WRD3.

7 Data, 1 Stop, Parity Even

232WRD6.

7 Data, 1 Stop, Parity Odd

232WRD1.

7 Data, 2 Stop Parity None

232WRD4.

7 Data, 2 Stop, Parity Even

232WRD7.

7 Data, 2 Stop, Parity Odd

232WRD2.

*** 8 Data, 1 Stop, Parity None**

232WRD5.

8 Data, 1 Stop, Parity Even

232WRD8.

8 Data, 1 Stop, Parity Odd

RS-232 Handshaking

RS232 Handshaking allows control of data transmission from the scanner using software commands from the host device.

RTS/CTS Off: RTS/CTS is turned off so no data flow control is used, but RTS is still active.

RTS/CTS Off, RTS Inactive: RTS/CTS is turned off so no data flow control is used and RTS is inactive.

Flow Control, No Timeout: The scanner asserts RTS when it has data to send, and will wait indefinitely for CTS to be asserted by the host.

Character-Based Flow Control, No Timeout: The scanner asserts RTS when it has a character to send, and will wait indefinitely for CTS to be asserted by the host

Two-Direction Flow Control: The scanner asserts RTS when it is OK for the host to transmit. The host asserts CTS when it is OK for the device to transmit.

Flow Control with Timeout: The scanner asserts RTS when it has data to send and waits for a delay (see RS232 Timeout on page 2-27) for CTS to be asserted by the host. If the delay time expires and CTS is not asserted, the device transmit buffer is cleared and scanning may resume.

Character-Based Flow Control with Timeout: The scanner asserts RTS when it has a character to send and waits for a delay (see RS232 Timeout on page 2-27) for CTS to be asserted by the host. If the delay time expires and CTS is not asserted, the device transmit buffer is cleared and scanning may resume.

CTS-Based Flow Control, No Timeout: When the host asserts CTS, scanning is enabled. When CTS is not asserted, scanning is disabled.

RTS On: RTS only is on during transmission. CTS is ignored.

Default = RTS/CTS Off.

232CTS0.

*** RTS/CTS Off**

232CTS10.

RTS/CTS Off, RTS Inactive

232CTS1.

Flow Control, No Timeout

232CTS7.

Character-Based Flow Control, No Timeout

232CTS2.

Two-Direction Flow Control

232CTS3.

Flow Control with Timeout

232CTS4.

Character-Based Flow Control with Timeout

232CTS5.

CTS-Based Flow Control, No Timeout

232CTS8.

RTS On

232CTS9.

No RTS if CTS is On

RS232 Timeout

When using Flow Control with Timeout, you must program the length of the delay you want to wait for CTS from the host. Set the length (in milliseconds) for a timeout by scanning the bar code below, then setting the timeout (from 1-65535 milliseconds) by scanning digits from the inside back cover, then scanning **Save**. *Default = 1000.*

232DEL.

RS232 Timeout

XON/XOFF

Standard ASCII control characters can be used to tell the scanner to start sending data (**XON/XOFF On**) or to stop sending data (**XON/XOFF Off**). When the host sends the XOFF character (DC3, hex 13) to the scanner, data transmission stops. To resume transmission, the host sends the XON character (DC1, hex 11). Data transmission continues where it left off when XOFF was sent. *Default = XON/XOFF Off*.

232XON1.

XON/XOFF On

232XON0.

*** XON/OFF Off**

ACK/NAK

After transmitting data, the scanner waits for an ACK character (hex 06) or a NAK character (hex 15) response from the host. If ACK is received, the communications cycle is completed and the scanner looks for more bar codes. If NAK is received, the last set of bar code data is retransmitted and the scanner waits

for ACK/NAK again. Turn on the ACK/NAK protocol by scanning the **ACK/NAK On** bar code below. To turn off the protocol, scan **ACK/NAK Off**. *Default = ACK/NAK Off.*

232ACK1.

ACK/NAK On

232ACK0.

*** ACK/NAK Off**

Scanner to Bioptic Communication

The following settings are used to set up communication between Honeywell scanners and bioptic scanners.

Note: The scanner's baud rate must be set to 38400 and the RS232 timeout must be set to 3000 in order to communicate with a bioptic scanner. See "RS232 Modifiers" on page 2-22, and RS232 Timeout on page 2-27 for further information.

Scanner-Bioptic Packet Mode

Packet Mode On must be scanned to set the scanner's format so it is compatible with a bioptic scanner. *Default = Packet Mode Off.*

232PKT0.

*** Packet Mode Off**

232PKT2.

Packet Mode On

3 Input/Output Settings

Good Read Indicators

Beeper – Good Read

The beeper may be programmed On or Off in response to a good read. Turning this option off, only turns off the beeper response to a good read indication. All error and menu beeps are still audible. *Default = On.*

BEPBEP1.

*** On**

BEPBEP0.

Off

Beeper Volume – Good Read

The beeper volume codes modify the volume of the beep the scanner emits on a good read. *Default = High.*

BEPLVL1.

Low

BEPLVL2.

Medium

BEPLVL3.

***High**

BEPLVL0.

Off

Beeper Pitch – Good Read

The beeper pitch codes modify the pitch (frequency) of the beep the scanner emits on a good read. *Default = Medium*

BEPFQ11600.

Low (1600 Hz)

BEPFQ12750.

*** Medium (2750 Hz)**

BEPFQ14200.

High (4200 Hz)

Beeper Duration – Good Read

The beeper duration codes modify the length of the beep the scanner emits on a good read. *Default = Normal.*

BEPBIP0.

*** Normal Beep**

BEPBIP1.

Short Beep

Beeper Pitch – Error

The beeper pitch codes modify the pitch (frequency) of the sound the scanner emits when there is a bad read or error. *Default = 100 Hz.*

BEPFQ2100.

*** Razz (100 Hz)**

BEPFQ22000.

*** Medium (2000 Hz)**

BEPFQ24200.

High (4200 Hz)

LED – Good Read

The LED indicator can be programmed On or Off in response to a good read. *Default = On.*

BEPLED1.

*** On**

BEPLED0.

Off

Number of Beeps – Good Read

The number of beeps of a good read can be programmed from 1 - 9. The same number of beeps will be applied to the beeper and LED in response to a good read. For example, if you program this option to have five beeps, there will be five beeps and five LED flashes in response to a good read. The beeps and

LED flashes are in sync with one another. To change the number of beeps, scan the bar code below and then scan a digit (1-9) bar code and the **Save** bar code on the inside the back cover of this manual. *Default = One.*

BEPRPT.

Number of Pulses

Good Read Delay

This sets the minimum amount of time before the scanner can read another bar code. *Default = No Delay.*

DLYGRD0.

*** No Delay**

DLYGRD500.

Short Delay (500 ms)

DLYGRD1000.

Medium Delay (1000 ms)

DLYGRD1500.

Long Delay (1500 ms)

User-Specified Good Read Delay

If you want to set your own length for the good read delay, scan the bar code below, then set the delay (from 0-30,000 milliseconds) by scanning digits from the inside back cover, then scanning ***Save***.

DLYGRD.

User-Specified Good Read Delay

Trigger Modes

Manual/Serial Trigger

You can activate the scanner either by pressing the trigger, or using a serial trigger command (see Trigger Commands on page 9-4). When in manual trigger mode, the scanner scans until a bar code is read, or until the trigger is released.

When in serial mode, the scanner scans until a bar code has been read or until the deactivate command is sent. In serial mode, the scanner can also be set to turn itself off after a specified time has elapsed (see Read Time-Out, which follows).

TRGMOD0.

*** Manual/Serial Trigger**

Read Time-Out

Use this selection to set a time-out (in milliseconds) of the scanner's trigger when using serial commands to trigger the scanner. Once the scanner has timed out, you can activate the scanner either by pressing the trigger or using a serial trigger command. After scanning the **Read Time-Out** bar code, set the time-out duration (from 0-300,000 milliseconds) by scanning digits from the inside back cover, then scanning **Save**. *Default = 30,000.*

TRGSTO.

Read Time-Out

Automatic Trigger

The scanner scans continuously using internal LEDs to detect bar codes.

TRGMOD1.

Automatic Trigger

Presentation Mode

Presentation Mode uses ambient light to detect bar codes. The LEDs are off for ambient conditions until a change occurs in the scanner's field of view. Then the LEDS turn on automatically to read the code. If the light level in the room is not high enough, Presentation Mode may not work properly.

TRGMOD3.

Presentation Mode

Continuous Illumination Mode (Manual Trigger only)

If you have several bar codes that are close together, you may wish to have a continuous aiming beam on in order to properly aim the scanner at one bar code. Scan the **Continuous Illumination On** bar code to program the scanner for this capability. Once you have the aiming beam over the correct bar code, pull the trigger to read the code. Scan the **Continuous Illumination Off** bar code to turn off this feature.

ILLAON1.

Continuous Illumination Mode On

ILLAON0.

*** Continuous Illumination Mode Off**

Hands Free Time-Out

The Automatic Trigger and Presentation Modes are referred to as "hands free" modes. If the scanner's trigger is pulled when using a hands free mode, the scanner changes to manual trigger mode. You can set the time the scanner should remain in manual trigger mode by setting the Hands Free Time-Out. Once the time-out value is reached, (if there have been no further trigger pulls) the scanner reverts to the original hands free mode.

Scan the ***Hands Free Time-Out*** bar code, then scan the time-out duration (from 0-300,000 milliseconds) from the inside back cover, and ***Save***. *Default = 5,000 ms.*

TRGPTO.

Hands Free Time-Out

Reread Delay

This sets the time period before the scanner can read the *same* bar code a second time. Setting a reread delay protects against accidental rereads of the same bar code. Longer delays are effective in minimizing accidental rereads at POS (point of sale). Use shorter delays in applications where repetitive bar code scanning is required. *Default = Medium.*

Reread Delay only works when in automatic trigger mode or presentation mode (see page 3-5).

DLYRRD500.

Short (500 ms)

DLYRRD750.

*** Medium (750 ms)**

DLYRRD1000.

Long (1000 ms)

DLYRRD2000.

Extra Long (2000 ms)

User-Specified Reread Delay

If you want to set your own length for the reread delay, scan the bar code below, then set the delay (from 0-30,000 milliseconds) by scanning digits from the inside back cover, then scanning ***Save***.

DLYRRD.

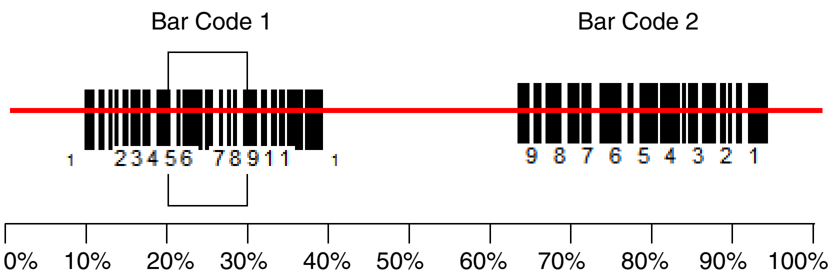
User-Specified Reread Delay

Centering

Use Centering to narrow the scanner's field of view to make sure the scanner reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, centering will insure that only the desired codes are read.

If a bar code is not touched by a predefined window, it will not be decoded or output by the scanner. If centering is turned on by scanning **Centering On**, the scanner only reads codes that pass through the centering window you specify using the **Left of Centering Window**, or **Right of Centering Window** bar codes.

In the example below, the red line is the full scanner field of view and the white boxed area is the centering window. The centering window has been set to 20% left and 30% right, as shown in the legend at the bottom. Since Bar Code 1 passes through the centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.



Scan **Centering On**, then scan one of the following bar codes to change the left or right of the centering window. Then scan the percent you want to shift the centering window using digits on the inside back cover of this manual. Scan **Save**. *Default Centering = 40% for Left, 60% for Right.*

DECWIN1.

Centering On

DECWIN0.

*** Centering Off**

DECLFT.

Left of Centering Window

DECRGT.

Right of Centering Window

Output Sequence Overview

Output Sequence Editor

This programming selection allows you to program the scanner to output data (when scanning more than one symbol) in whatever order your application requires, regardless of the order in which the bar codes are scanned. Reading the ***Default Sequence*** symbol programs the scanner to the Universal values, shown below. These are the defaults. Be **certain** you want to delete or clear all formats before you read the ***Default Sequence*** symbol.

Note: To make Output Sequence Editor selections, you'll need to know the code I.D., code length, and character match(es) your application requires. Use the Alphanumeric symbols (inside back cover) to read these options.

Note: You must hold the trigger while reading each bar code in a sequence.

To Add an Output Sequence

1. Scan the ***Enter Sequence*** symbol (see Require Output Sequence, page 3-13).
2. **Code I.D.**
   On the Symbology Charts on page A-1, find the symbology to which you want to apply the output sequence format. Locate the Hex value for that symbology and scan the 2 digit hex value from the Programming Chart (inside back cover).
3. **Length**
   Specify what length (up to 9999 characters) of data output will be acceptable for this symbology. Scan the four digit data length from the Programming Chart. (Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.) When calculating the length, you must count any programmed prefixes, suffixes, or formatted characters as part of the length (unless using 9999).
4. **Character Match Sequences**
   On the ASCII Conversion Chart (Code Page 1252), page A-3, find the Hex value that represents the character(s) you want to match. Use the Programming Chart to read the alphanumeric combination that represents the ASCII characters. (99 is the Universal number, indicating all characters.)
5. **End Output Sequence Editor**
   Scan ***F F*** to enter an Output Sequence for an additional symbology, or ***Save*** to save your entries.

Other Programming Selections

- ***Discard***
  This exits without saving any Output Sequence changes.

Output Sequence Editor

SEQBLK.

Enter Sequence

SEQDFT.

Default Sequence

Output Sequence Example

In this example, you are scanning Code 93, Code 128, and Code 39 barcodes, but you want the image scanner to output Code 39 1st, Code 128 2nd, and Code 93 3rd, as shown below.

Note: Code 93 must be enabled to use this example.

A - Code 39

B - Code 128

C - Code 93

You would set up the sequence editor with the following command line:

SEQBLK62999941FF6A999942FF69999943FF

The breakdown of the command line is shown below:

SEQBLKsequence editor start command
62 code identifier for **Code 39**
9999 code length that must match for Code 39, 9999 = all lengths
41 start character match for Code 39, 41h = “A”
FF termination string for first code
6A code identifier for **Code 128**
9999 code length that must match for Code 128, 9999 = all lengths

42	start character match for Code 128, 42h = “B”
FF	termination string for second code
69	code identifier for **Code 93**
9999	code length that must match for Code 93, 9999 = all lengths
43	start character match for Code 93, 43h = “C”
FF	termination string for third code

To program the previous example using specific lengths, you would have to count any programmed prefixes, suffixes, or formatted characters as part of the length. If you use the example on page 3-11, but assume a <CR> suffix and specific code lengths, you would use the following command line:

SEQBLK62001241FF6A001342FF69001243FF

The breakdown of the command line is shown below:

SEQBLK	sequence editor start command
62	code identifier for **Code 39**
0012	A - Code 39 sample length (11) plus CR suffix (1) = 12
41	start character match for Code 39, 41h = “A”
FF	termination string for first code
6A	code identifier for **Code 128**
0013	B - Code 128 sample length (12) plus CR suffix (1) = 13
42	start character match for Code 128, 42h = “B”
FF	termination string for second code
69	code identifier for **Code 93**
0012	C - Code 93 sample length (11) plus CR suffix (1) = 12
43	start character match for Code 93, 43h = “C”
FF	termination string for third code

Output Sequence Editor

SEQBLK.

Enter Sequence

SEQDFT.

Default Sequence

Require Output Sequence

When an output sequence is ***Required***, all output data must conform to an edited sequence or the image scanner will not transmit the output data to the host device. When it's ***On/Not Required***, the image scanner will attempt to get the output data to conform to an edited sequence, but if it cannot, the image scanner transmits all output data to the host device as is.

When the output sequence is ***Off***, the barcode data is output to the host as the image scanner decodes it.

Note: This selection is unavailable when the Multiple Symbols Selection is turned on.

SEQ_EN2.

Required

SEQ_EN1.

On/Not Required

SEQ_EN0.

***Off**

Multiple Symbols

When this programming selection is turned ***On***, it allows you to read multiple symbols with a single pull of the scanner's trigger. If you press and hold the trigger, aiming the scanner at a series of symbols, it reads unique symbols once,

beeping (if turned on) for each read. The scanner attempts to find and decode new symbols as long as the trigger is pulled. When this programming selection is turned ***Off***, the scanner will only read the symbol closest to the aiming beam.

SHOTGN1.

On

SHOTGN0.

*** Off**

No Read

With No Read turned ***On***, the scanner sends an “NR” to the host if you pull and release the trigger without reading a code (e.g., bad bar code). If No Read is turned ***Off***, the “NR” will not be sent to the host.

SHWNRD1.

On

SHWNRD0.

*** Off**

If you want a different notation than “NR,” for example, “Error,” or “Bad Code,” you can edit the output message using the Data Formatter (page 5-14). The hex code for the No Read symbol is 9C.

Video Reverse

Video Reverse is used to allow the scanner to read bar codes that are inverted. The “Off” bar code below is an example of this type of bar code.

Note: If additional menuing is required, Video Reverse must be disabled to read the menu bar codes and then re-enabled after menuing is completed.

VIDREV1.

On

VIDREV0REV.

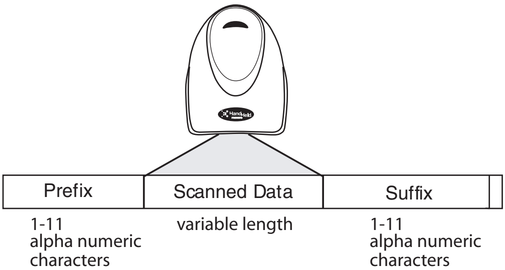
*** Off**

4 Data Editing

Prefix/Suffix Overview

When a bar code is scanned, additional information is sent to the host computer along with the bar code data. This group of bar code data and additional, user-defined data is called a “message string.” The selections in this section are used to build the user-defined data into the message string.

Prefix and Suffix characters are data characters that can be sent before and after scanned data. You can specify if they should be sent with all symbologies, or only with specific symbologies. The following illustration shows the breakdown of a message string:



Points to Keep In Mind

- It is not necessary to build a message string. The selections in this chapter are only used if you wish to alter the default settings.

Note: Plug and Play bar codes for interface selections (see Programming the Interface - Plug and Play on page 2-1) automatically program a CR/LF suffix.

- A prefix or suffix may be added or cleared from one symbology or all symbologies.
- You can add any prefix or suffix from the ASCII Conversion Chart (Code Page 1252), page A-3, plus Code I.D. and AIM I.D.
- You can string together several entries for several symbologies at one time.
- Enter prefixes and suffixes in the order in which you want them to appear on the output.
- When setting up for specific symbologies (as opposed to all symbologies), the specific symbology ID value counts as an added prefix or suffix character.
- The maximum size of a prefix or suffix configuration is 200 characters, which includes header information

To Add a Prefix or Suffix

Step 1. Scan the **Add Prefix** or **Add Suffix** symbol (page 4-3).

Step 2. Determine the 2 digit Hex value from the Symbology Chart (included in Appendix A) for the symbology to which you want to apply the prefix or suffix. For example, for Code 128, Code ID is "j" and Hex ID is "6A".

Step 3. Scan the 2 hex digits from the inside the back cover of this manual or scan **9**, **9** for all symbologies.

Step 4. Determine the hex value from the ASCII Conversion Chart (Code Page 1252), page A-3, for the prefix or suffix you wish to enter.

Step 5. Scan the 2 digit hex value from the inside the back cover of this manual.

Step 6. Repeat Steps 4 and 5 for every prefix or suffix character.

Step 7. To add the Code I.D., scan **5**, **C**, **8**, **0**.
To add AIM I.D., scan **5**, **C**, **8**, **1**.
To add a backslash (\), scan **5**, **C**, **5**, **C**.

Note: To add a backslash (\) as in Step 7, you must scan 5C twice – once to create the leading backslash and then to create the backslash itself.

Step 8. Scan **Save** to exit and save, or scan **Discard** to exit without saving.

Repeat Steps 1-6 to add a prefix or suffix for another symbology.

Example: Add a Tab Suffix to All Symbologies

Step 1. Scan **Add Suffix**.

Step 2. Scan **9**, **9** from the Programming Chart inside the back cover of this manual to apply this suffix to all symbologies.

Step 3. Scan **0**, **9** from the Programming Chart inside the back cover of this manual. This corresponds with the hex value for a horizontal tab, shown in the ASCII Conversion Chart (Code Page 1252), beginning on page A-3.

Step 4. Scan **Save**, or scan **Discard** to exit without saving.

To Clear One or All Prefixes or Suffixes

You can clear a single prefix or suffix, or clear all prefixes/suffixes for a symbology. When you Clear One Prefix (Suffix), the specific character you select is deleted from the symbology you want. When you Clear All Prefixes (Suffixes), all the prefixes or suffixes for a symbology are deleted.

Step 1. Scan the **Clear One Prefix** or **Clear One Suffix** symbol.

Step 2. Determine the 2 digit Hex value from the Symbology Chart (included in Appendix A) for the symbology from which you want to clear the prefix or suffix.

Step 3. Scan the 2 digit hex value from the inside the back cover of this manual or scan **9**, **9** for all symbologies.

Your change is automatically saved.

To Add a Carriage Return Suffix to All Symbologies

Scan the following bar code if you wish to add a carriage return suffix to all symbologies at once. This action first clears all current suffixes, then programs a carriage return suffix for all symbologies.

VSUFCR.

Add CR Suffix
All Symbologies

Prefix Selections

PREBK2.

Add Prefix

PRECL2.

Clear One Prefix

PRECA2.

Clear All Prefixes

Suffix Selections

SUFBK2.

Add Suffix

SUFCL2.

Clear One Suffix

SUFCA2.

Clear All Suffixes

Transmit Alternate Extended ASCII Characters

You may need to emulate special keyboard functions, such as up or down arrows, Alt/Make or Alt/Break commands, that are not supported in the Extended ASCII Character table. Refer to Alternate Extended ASCII Characters (page 4-5) for a range of keyboard function keys and corresponding decimal and hex characters. If you scan the **Transmit Alternate Extended ASCII** code, any hex entries in a prefix or suffix will result in the corresponding Keyboard Function output.

Example: **Transmit Alternate Extended ASCII** is enabled, and you scan **Add Suffix**, then scan **9 9 8 9.** All symbologies (99) would have a suffix of a Page Down (hex 89) added to them.

When **Transmit Normal Extended ASCII** is selected, the normal extended ASCII character is transmitted (see ASCII Conversion Chart (Code Page 1252) on page A-3).

Example: **Transmit Normal Extended ASCII** is enabled, and you scan **Add Suffix**, then scan **9 9 8 9.** All symbologies (99) would have a suffix of a ‰ character added to them.

Default = Transmit Alternate Extended ASCII.

KBDEXT0.

Transmit Alternate Extended ASCII

KBDEXT1.

*** Transmit Normal Extended ASCII**

Alternate Extended ASCII Characters					
DEC	HEX	Keyboard Function	DEC	HEX	Keyboard Function
128	80	up arrow ↑	152	98	F9
129	81	down arrow ↓	153	99	F10
130	82	right arrow →	154	9A	F11
131	83	left arrow ←	155	9B	F12
132	84	Insert	156	9C	Numeric Keypad +
133	85	Delete	157	9D	Numeric Keypad -
134	86	Home	158	9E	Numeric Keypad *
135	87	End	159	9F	Caps Lock
136	88	Page Up	160	A0	Num Lock
137	89	Page Down	161	A1	Left Alt
138	8A	Right ALT	162	A2	Left Ctrl
139	8B	Right CTRL	163	A3	Left Shift
140	8C	Reserved	164	A4	Right Shift
141	8D	Reserved	165	A5	Print Screen
142	8E	Numeric Keypad Enter	166	A6	Tab
143	8F	Numeric Keypad /	167	A7	Shift Tab
144	90	F1	168	A8	Enter
145	91	F2	169	A9	Esc
146	92	F3	170	AA	Alt Make
147	93	F4	171	AB	Alt Break
148	94	F5	172	AC	Control Make
149	95	F6	173	AD	Control Break
150	96	F7	174	AE	Alt Sequence with 1 Character
151	97	F8	175	AF	Ctrl Sequence with 1 Character

Function Code Transmit

When this selection is enabled and function codes are contained within the scanned data, the scanner transmits the function code to the terminal. Charts of these function codes are provided in Supported Interface Keys starting on page 7-2. When the scanner is in keyboard wedge mode, the scan code is converted to a key code before it is transmitted. *Default = Enable.*

RMVFNC0.

*** Enable**

RMVFNC1.

Disable

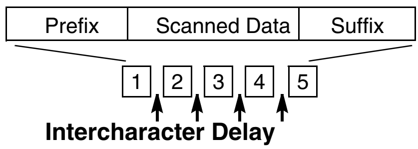
Intercharacter, Interfunction, and Intermessage Delays

Some terminals drop information (characters) if data comes through too quickly. Intercharacter, interfunction, and intermessage delays slow the transmission of data, increasing data integrity.

Each delay is composed of a 5 millisecond step. You can program up to 99 steps (of 5 ms each) for a range of 0-495 ms.

Intercharacter Delay

An intercharacter delay of up to 495 milliseconds may be placed between the transmission of each character of scanned data. Scan the **Intercharacter Delay** bar code below, then scan the number of steps in 5 millisecond increments and the **Save** bar code using the inside the back cover of this manual.



DLYCHR.

Intercharacter Delay

To remove this delay, scan the **Intercharacter Delay** bar code, then set the number of steps to 0. Scan the **Save** bar code using the inside the back cover of this manual.

Note: Intercharacter delays are not supported in USB serial.

User Specified Intercharacter Delay

An intercharacter delay of up to 495 milliseconds may be placed after the transmission of a particular character of scanned data. Scan the **Delay Length** bar code below, then scan the number of steps in 5 millisecond increments and the **Save** bar code using the inside the back cover of this manual.

Next, scan the **Character to Trigger Delay** bar code, then the 2-digit hex value for a printable character to trigger the delay (see Lower ASCII Reference Table on page A-5). The range is 00-FF.

DLYCRX.

Delay Length

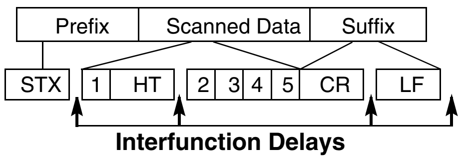
DLY_XX.

Character to Trigger Delay

To remove this delay, scan the **Delay Length** bar code, and set the number of steps to 0. Scan the **Save** bar code using the inside the back cover of this manual.

Interfunction Delay

An interfunction delay of up to 495 milliseconds may be placed between the transmission of each control character in the message string. Scan the **Interfunction Delay** bar code below, then scan the number of steps in 5 millisecond increments and the **Save** bar code using the inside the back cover of this manual.



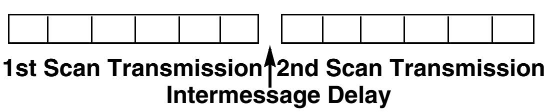
DLYFNC.

Interfunction Delay

To remove this delay, scan the **Interfunction Delay** bar code, then set the number of steps to 0. Scan the **Save** bar code using the inside the back cover of this manual.

Intermessage Delay

An intermessage delay of up to 495 milliseconds may be placed between each scan transmission. Scan the **Intermessage Delay** bar code below, then scan the number of steps in 5 millisecond increments and the **Save** bar code using the inside the back cover of this manual.



DLYMSG.

Intermessage Delay

To remove this delay, scan the **Intermessage Delay** bar code, then set the number of steps to 0. Scan the **Save** bar code using the inside the back cover of this manual.

5 Data Formatting

Data Format Editor Introduction

You may use the Data Format Editor to change the scanner's output. For example, you can use the Data Format Editor to insert characters at certain points in bar code data as it is scanned. The selections in the following pages are used only if you wish to alter the output. *Default Data Format setting = None.*

Normally, when you scan a bar code, it gets outputted automatically; however when you do a format, you must use a "send" command (see Send Commands on page 5-4) within the format program to output data.

Multiple formats may be programmed into the scanner. They are stacked in the order in which they are entered. However, the following list presents the order in which formats are applied:

1. Specific Term ID, Actual Code ID, Actual Length
2. Specific Term ID, Actual Code ID, Universal Length
3. Specific Term ID, Universal Code ID, Actual Length
4. Specific Term ID, Universal Code ID, Universal Length
5. Universal Term ID, Actual Code ID, Actual Length
6. Universal Term ID, Actual Code ID, Universal Length
7. Universal Term ID, Universal Code ID, Actual Length
8. Universal Term ID, Universal Code ID, Universal Length

The maximum size of a data format configuration is 256 bytes, which includes header information. No format can contain more than 50 bytes.

If a bar code is read that fails the first data format, the next data format, if there is one, will be used on the bar code data. If there is no other data format, the raw data is output.

If you have changed data format settings, and wish to clear all formats and return to the factory defaults, scan the **Default Data Format** code below.

DFMDF3.

*** Default Data Format**

To Add a Data Format

Step 1. Scan the **Enter Data Format** symbol (page 5-14).

Step 2. Select **Primary Format**
Scan **0** using the inside the back cover of this manual to indicate that this is your primary format.

Step 3. Terminal Type

Refer to the Supported Terminals Chart (page 5-4) and locate the Terminal ID number for your PC. Scan three numeric bar codes on the inside back cover to program the scanner for your terminal ID (you must enter 3 digits). For example, scan **0 0 3** for an AT wedge.

Note: The wildcard for all terminal types is 099.

Step 4. Code I.D.

In Appendix A find the symbology to which you want to apply the data format. Locate the Hex value for that symbology and scan the 2 digit hex value from the inside the back cover of this manual.

Step 5. Length

Specify what length (up to 9999 characters) of data will be acceptable for this symbology. Scan the four digit data length from the inside the back cover of this manual. (Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.)

Step 6. Editor Commands

Refer to the Format Editor Commands Chart (page 5-4). Scan the symbols that represent the command you want to enter.

Step 7. Scan **Save** from the inside the back cover of this manual to save your entries.

DFMBK3.

Enter Data Format

MNUSAV.

Save

MNUABT.

Discard

Other Programming Selections

- **Clear One Data Format**
  This deletes one data format for one symbology. Scan **0** from the inside the back cover of this manual to indicate you are clearing your primary format. Scan the Terminal Type (refer to the Supported Terminals Chart on page 5-4), Code I.D. (refer to the Symbology Charts on page A-1), and the bar code

data length for the specific data format that you want to delete. All other formats remain unaffected.

- **Save** from the inside the back cover of this manual
  This exits, saving any Data Format changes.
- **Discard** from the inside the back cover of this manual
  This exits without saving any Data Format changes.

DFMCL3.

Clear One Data Format

DFMCA3.

Clear All Data Formats

MNUSAV.

Save

MNUABT.

Discard

Interface / Terminal ID Table

Interface		Terminal ID
USB	PC keyboard (HID)	124
	Mac Keyboard	125
	PC Keyboard (Japanese)	134
	Serial (COM driver required)	130
	HID POS	131
	USB SurePOS Handheld	128
	USB SurePOS Tabletop	129
Serial	RS232 TTL	000
	RS232 True	000
	RS485 (IBM-HHBCR 1+2, 46xx)	051
Keyboard	PS2 compatibles	003
	AT compatibles	002

Data Format Editor Commands

When working with the Data Format Editor, a virtual cursor is moved along your input data string. The following commands are used to both move this cursor to different positions, and to select, replace, and insert data into the final output.

Send Commands

Send all characters

F1 Include in the output message all of the characters from the input message, starting from current cursor position, followed by an insert character. *Syntax = F1xx* where xx stands for the insert character's hex value for the CP1252 character. Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

Send a number of characters

F2 Include in the output message a number of characters followed by an insert character. Start from the current cursor position and continue for "nn" characters or through the last character in the input message, followed by character "xx." *Syntax = F2nnxx* where nn stands for the numeric value (00-99) for the number of characters, and xx stands for the the insert character's hex value for the CP1252 character. Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

F2 Example: Send a number of characters

1234567890ABCDEFGHIJ

Send the first 10 characters from the bar code above, followed by a carriage return. Command string: **F2100D**

F2 is the “Send a number of characters” command

10 is the number of characters to send

0D is the hex value for a CR

The data is output as: **1234567890**

F2 and F1 Example: Split characters into 2 lines

Send the first 10 characters from the bar code above, followed by a carriage return, followed by the rest of the characters.

Command string: **F2100DF10D**

F2 is the “Send a number of characters” command

10 is the number of characters to send for the first line

0D is the hex value for a CR

F1 is the “Send all characters” command

0D is the hex value for a CR

The data is output as: **1234567890**
ABCDEFGHIJ
<CR>

Send all characters up to a particular character

F3 Include in the output message all characters from the input message, starting with the character at the current cursor position and continuing to, but not including, the search character “ss,” followed by an insert character. The cursor is moved forward to the “ss” character. *Syntax = F3ssxx* where ss stands for the search character’s hex value for the CP1252 character, and xx stands for the insert character’s hex value for the CP1252 character.
Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

F3 Example: Send all characters up to a particular character

1234567890ABCDEFGHIJ

Using the bar code above, send all characters up to but not including “D,” followed by a carriage return.

Command string: **F3440D**

F3 is the “Send all characters up to a particular character” command

44 is the hex value for a 'D”

0D is the hex value for a CR

The data is output as: **1234567890ABC <CR>**

Send all but the last characters

E9 Include in the output message all but the last “nn” characters, starting from the current cursor position. The cursor is moved forward to one position past the last input message character included. *Syntax = E9nn* where nn stands for the numeric value (00-99) for the number of characters that will not be sent at the end of the message.

Insert a character multiple times

F4 Send “xx” character “nn” times in the output message, leaving the cursor in the current position. *Syntax = F4xxnn* where xx stands for the insert character’s hex value for the CP1252 character, and nn is the numeric value (00-99) for the number of times it should be sent. Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

E9 and F4 Example: Send all but the last characters, followed by 2 tabs

1234567890ABCDEFGHIJ

Send all characters except for the last 8 from the bar code above, followed by 2 tabs.

Command string: **E908F40902**

E9 is the “Send all but the last characters” command

08 is the number of characters at the end to ignore

F4 is the “Insert a character multiple times” command

09 is the hex value for a horizontal tab

02 is the number of time the tab character is sent

The data is output as: **1234567890AB <tab><tab>**

Insert symbology name

B3 Insert the name of the bar code’s symbology in the output message, without moving the cursor. Only symbologies with a Honeywell ID are included (see Symbology Charts on page A-1). Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

Insert bar code length

B4 Insert the bar code's length in the output message, without moving the cursor. The length is expressed as a numeric string and does not include leading zeroes.

B3 and B4 Example: Insert the symbology name and length

1234567890ABCDEFGHIJ

Send the symbology name and length before the bar code data from the bar code above. Break up these insertions with spaces. End with a carriage return.

Command string: **B3F42001B4F42001F10D**

B3 is the "Insert symbology name" command

F4 is the "Insert a character multiple times" command

20 is the hex value for a space

01 is the number of time the space character is sent

B4 is the "Insert bar code length" command

F4 is the "Insert a character multiple times" command

20 is the hex value for a space

01 is the number of time the space character is sent

F1 is the "Send all characters" command

0D is the hex value for a CR

The data is output as: **Code128 20 1234567890ABCDEFGHIJ <CR>**

Move Commands

Move the cursor forward a number of characters

F5 Move the cursor ahead "nn" characters from current cursor position. *Syntax = F5nn* where nn is the numeric value (00-99) for the number of characters the cursor should be moved ahead.

F5 Example: Move the cursor forward and send the data

1234567890ABCDEFGHIJ

Move the cursor forward 3 characters, then send the rest of the the bar code data from the bar code above. End with a carriage return.

Command string: **F503F10D**

F5 is the "Move the cursor forward a number of characters" command

03 is the number of characters to move the cursor

F1 is the “Send all characters” command

0D is the hex value for a CR

The data is output as: **4567890ABCDEFGHIJ**
<CR>

Move the cursor backward a number of characters

F6 Move the cursor back “nn” characters from current cursor position. *Syntax = F6nn* where nn is the numeric value (00-99) for the number of characters the cursor should be moved back.

Move the cursor to the beginning

F7 Move the cursor to the first character in the input message. *Syntax = F7.*

Move the cursor to the end

EA Move the cursor to the last character in the input message. *Syntax = EA.*

Search Commands

Search forward for a character

F8 Search the input message forward for “xx” character from the current cursor position, leaving the cursor pointing to the “xx” character. *Syntax = F8xx* where xx stands for the search character’s hex value for the CP1252 character.
Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

F8 Example: Send bar code data that starts after a particular character

1234567890ABCDEFGHIJ

Search for the letter “D” in bar codes and send all the data that follows, including the “D.” Using the bar code above:

Command string: **F844F10D**

F8 is the “Search forward for a character” command

44 is the hex value for “D”

F1 is the “Send all characters” command

0D is the hex value for a CR

The data is output as: **DEFGHIJ**
<CR>

Search backward for a character

F9 Search the input message backward for “xx” character from the current cursor position, leaving the cursor pointing to the “xx” character. *Syntax = F9xx* where xx stands for the search character’s hex value for the CP1252 character.
Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

Search forward for a string

B0 Search forward for “s” string from the current cursor position, leaving cursor pointing to “s” string. Syntax = B0nnnnS where nnnn is the string length (up to 9999), and S consists of the ASCII hex value of each character in the match string. For example, B0000454657374 will search forward for the first occurrence of the 4 character string “Test.”
Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

B0 Example: Send bar code data that starts after a string of characters

1234567890ABCDEFGHIJ

Search for the letters “FGH” in bar codes and send all the data that follows, including “FGH.” Using the bar code above:

Command string: **B00003464748F10D**

B0 is the “Search forward for a string” command

0003 is the string length (3 characters)

46 is the hex value for “F”

47 is the hex value for “G”

48 is the hex value for “H”

F1 is the “Send all characters” command

0D is the hex value for a CR

The data is output as: **FGHIJ**
<CR>

Search backward for a string

B1 Search backward for “s” string from the current cursor position, leaving cursor pointing to “s” string. Syntax = B1nnnnS where nnnn is the string length (up to 9999), and S consists of the ASCII hex value of each character in the match string. For example, B1000454657374 will search backward for the first occurrence of the 4 character string “Test.”
Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

Search forward for a non-matching character

E6 Search the input message forward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax = E6xx* where xx stands for the search character’s hex value for the CP1252 character. Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

E6 Example: Remove zeroes at the beginning of bar code data

000037692

This example shows a bar code that has been zero filled. You may want to ignore the zeroes and send all the data that follows. E6 searches forward for the first character that is not zero, then sends all the data after, followed by a carriage return. Using the bar code above:

Command string: **E630F10D**

E6 is the “Search forward for a non-matching character” command

30 is the hex value for 0

F1 is the “Send all characters” command

0D is the hex value for a CR

The data is output as: **37692**
<CR>

Search backward for a non-matching character

E7 Search the input message backward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax = E7xx* where xx stands for the search character’s hex value for the CP1252 character. Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

Miscellaneous Commands

Suppress characters

FB Suppress all occurrences of up to 15 different characters, starting at the current cursor position, as the cursor is advanced by other commands. When the FC command is encountered, the suppress function is terminated. The cursor is not moved by the FB command. Syntax = FBnnxxyy . .zz where nn is a count of the number of suppressed characters in the list, and xxyy .. zz is the list of characters to be suppressed.

FB Example: Remove spaces in bar code data

345 678 90

This example shows a bar code that has spaces in the data. You may want to remove the spaces before sending the data. Using the bar code above:

Command string: **FB0120F10D**

FB is the "Suppress characters" command

01 is the number of character types to be suppressed

20 is the hex value for a space

F1 is the "Send all characters" command

0D is the hex value for a CR

The data is output as: **34567890**
<CR>

Stop suppressing characters

FC Disables suppress filter and clear all suppressed characters. *Syntax = FC.*

Replace characters

E4 Replaces up to 15 characters in the output message, without moving the cursor. Replacement continues until the E5 command is encountered. *Syntax =* $E4nnxx_1xx_2yy_1yy_2...zz_1zz_2$ where nn is the total count of of the number of characters in the list (characters to be replaced plus replacement characters); xx_1 defines characters to be replaced and xx_2 defines replacement characters, continuing through zz_1 and zz_2.

E4 Example: Replace zeroes with CRs in bar code data

1234056780ABC

If the bar code has characters that the host application does not want included, you can use the E4 command to replace those characters with something else. In this example, you will replace the zeroes in the bar code above with carriage returns.

Command string: **E402300DF10D**

E4 is the "Replace characters" command

02 is the total count of characters to be replaced, plus the replacement characters (0 is replaced by CR, so total characters = 2)

30 is the hex value for 0

0D is the hex value for a CR (the character that will replace the 0)

F1 is the “Send all characters” command

0D is the hex value for a CR

The data is output as: **1234**
5678
ABC
<CR>

Stop replacing characters

E5 Terminates character replacement. *Syntax = E5.*

Compare characters

FE Compare the character in the current cursor position to the character “xx.” If characters are equal, move the cursor forward one position. *Syntax = FExx* where xx stands for the comparison character’s hex value for the CP1252 character.
Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

Compare string

B2 Compare the string in the input message to the string “s.” If the strings are equal, move the cursor forward past the end of the string. Syntax = B2nnnnS where nnnn is the string length (up to 9999), and S consists of the ASCII hex value of each character in the match string. For example, B2000454657374 will compare the string at the current cursor position with the 4 character string “Test.”
Refer to the ASCII Conversion Chart (Code Page 1252), page A-3 for decimal, hex and character codes.

Check for a number

EC Check to make sure there is an ASCII number at the current cursor position. The format is aborted if the character is not numeric.

EC Example: Only output the data if the bar code begins with a number

If you want only data from bar codes that begin with a number, you can use EC to check for the number.

Command string: **ECF10D**

EC is the “Check for a number” command

F1 is the “Send all characters” command

0D is the hex value for a CR

If this bar code is read, AB1234 the next data format, if there is one, will be used on the data. If there is no other format, the format fails and the raw data is output as **AB1234**.

If this bar code is read: 1234AB the data is output as:

1234AB
<CR>

Check for non-numeric character

ED Check to make sure there is a non-numeric ASCII character at the current cursor position. The format is aborted if the character is numeric.

ED Example: Only output the data if the bar code begins with a letter

If you want only data from bar codes that begin with a letter, you can use ED to check for the letter.

Command string: **EDF10D**

ED is the “Check for a non-numeric character” command

F1 is the “Send all characters” command

0D is the hex value for a CR

If this bar code is read, 1234AB the next data format, if there is one, will be used on this data. If there is no other format, the format fails and the raw data is output as **1234AB**.

If this bar code is read: AB1234 the data is output as:

AB1234
<CR>

Insert a delay

EF Inserts a delay of up to 49,995 milliseconds (in multiples of 5), starting from the current cursor position. Syntax = EFnnnn where nnnn stands for the delay in 5ms increments, up to 9999. This command can only be used with keyboard emulation.

Data Format Editor

DFMBK3.

Enter Data Format

DFMDF3.

*** Default Data Format**

DFMCL3.

Clear One Data Format

DFMCA3.

Clear All Data Formats

MNUSAV.

Save

MNUABT.

Discard

Data Formatter

When Data Formatter is turned off, the bar code data is output to the host as read (including prefixes and suffixes). Choose one of the following options.

Default = Data Formatter On.

DFM_EN1.

*** Data Formatter On,
but Not Required**

DFM_EN0.

Data Formatter Off

When Data Formatter is required, all input data must conform to an edited format or the scanner does not transmit the input data to the host device.

DFM_EN2.

Data Format On, Format Required

6 Symbologies

Introduction

This programming section contains the following menu selections. Refer to Chapter 9 for settings and defaults.

- All Symbologies
- China Post Code
- Codabar
- Codablock F
- Code 11
- Code 39
- Code 32 Pharmaceutical (PARAF)
- Code 49
- Code 93
- Code 128
- UPC-A/EAN-13 with Extended Coupon Code
- EAN/JAN 8
- GS1 DataBar Omnidirectional
- GS1 DataBar Limited
- GS1 DataBar Expanded
- Interleaved 2 of 5
- Label Code
- Matrix 2 of 5
- MSI
- Plessey Code
- Straight 2 of 5 IATA (two-bar start/stop)
- Straight 2 of 5 Industrial (three-bar start/stop)
- Telepen
- Trioptic Code
- UPC A
- UPC E
- Straight 2 of 5 IATA (two-bar start/stop)
- Straight 2 of 5 Industrial (three-bar start/stop)

All Symbologies

If you want to decode all the symbologies allowable for your scanner, scan the ***All Symbologies On*** code. If on the other hand, you want to decode only a particular symbology, scan All Symbologies Off followed by the On symbol for that particular symbology.

ALLENA1.

All Symbologies On

ALLENA0.

All Symbologies Off

Message Length

You are able to set the valid reading length of some of the bar code symbologies. If the data length of the scanned bar code doesn't match the valid reading length, the scanner will issue an error beep. You may wish to set the same value for minimum and maximum length to force the scanner to read fixed length bar code data. This helps reduce the chances of a misread.

EXAMPLE: Decode only those bar codes with a count of 9-20 characters.
Min. length = 09 Max. length = 20
EXAMPLE: Decode only those bar codes with a count of 15 characters.
Min. length = 15 Max. length = 15

For a value other than the minimum and maximum message length defaults, scan the bar codes included in the explanation of the symbology, then scan the digit value of the message length and **Save** bar codes on the inside the back cover of this manual. The minimum and maximum lengths and the defaults are included with the respective symbologies.

Codabar

<Default All Codabar Settings>

CBRDFT.

Codabar

CBRENA1.

***On**

CBRENA0.

Off

Codabar Start/Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code. You may either transmit, or not transmit Start/Stop characters.

Default = Don't Transmit.

CBRSSX1.

Transmit

CBRSSX0.

*** Don't Transmit**

Codabar Check Character

Codabar check characters are created using different "modulos." You can program the scanner to read only Codabar bar codes with Modulo 16 check characters. *Default = No Check Character.*

No Check Character indicates that the scanner reads and transmits bar code data with or without a check character.

When Check Character is set to ***Validate and Transmit***, the scanner will only read Codabar bar codes printed with a check character, and will transmit this character at the end of the scanned data.

When Check Character is set to ***Validate, but Don't Transmit***, the unit will only read Codabar bar codes printed ***with*** a check character, but will not transmit the check character with the scanned data.

CBRCK20.

*** No Check Character**

CBRCK21.

Validate Modulo 16, but Don't Transmit

CBRCK22.

Validate Modulo 16 and Transmit

Codabar Concatenation

Codabar supports symbol concatenation. When you enable concatenation, the scanner looks for a Codabar symbol having a “D” start character, adjacent to a symbol having a “D” stop character. In this case the two messages are concatenated into one with the “D” characters omitted.

Character Start Stop Start Stop

Codabar

A12D D34A

Select Require to prevent the scanner from decoding a single “D” Codabar symbol without its companion. This selection has no effect on Codabar symbols without Stop/Start D characters.

CBRCCT1.

On

CBRCCT0.

*** Off**

CBRCCT2.

Require

Codabar Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 2-60. Minimum Default = 4, Maximum Default = 60.

CBRMIN.

Minimum Message Length

CBRMAX.

Maximum Message Length

Code 39

< Default All Code 39 Settings >

C39DFT.

Code 39

C39ENA1.

***On**

C39ENA0.

Off

Code 39 Start/Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code. You may either transmit, or not transmit Start/Stop characters. *Default = Don't Transmit.*

C39SSX1.

Transmit

C39SSX0.

*** Don't Transmit**

Code 39 Check Character

No Check Character indicates that the scanner reads and transmits bar code data with or without a check character.

When Check Character is set to **Validate, but Don't Transmit**, the unit only reads Code 39 bar codes printed with a check character, but will not transmit the check character with the scanned data.

When Check Character is set to **Validate and Transmit**, the scanner only reads Code 39 bar codes printed with a check character, and will transmit this character at the end of the scanned data. *Default = No Check Character.*

C39CK20.

*** No Check Character**

C39CK21.

Validate, but Don't Transmit

C39CK22.

Validate and Transmit

Code 39 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 0-48. Minimum Default = 0, Maximum Default = 48.

C39MIN.

Minimum Message Length

C39MAX.

Maximum Message Length

Code 39 Append

This function allows the scanner to append the data from several Code 39 bar codes together before transmitting them to the host computer. When this function is enabled, the scanner stores those Code 39 bar codes that start with a space (excluding the start and stop symbols), and does not immediately transmit the data. The scanner stores the data in the order in which the bar codes

are read, deleting the first space from each. The scanner transmits the appended data when it reads a Code 39 bar code that starts with a character other than a space. *Default = Off.*

C39APP1.

On

C39APP0.

***Off**

Code 32 Pharmaceutical (PARAF)

Code 32 Pharmaceutical is a form of the Code 39 symbology used by Italian pharmacies. This symbology is also known as PARAF. *Default = Off.*

C39B321.

On

C39B320.

*** Off**

Full ASCII

If Full ASCII Code 39 decoding is enabled, certain character pairs within the bar code symbol will be interpreted as a single character. For example: $V will be decoded as the ASCII character SYN, and /C will be decoded as the ASCII character #. *Default = Off.*

NUL	%U	DLE	$P	SP	SPACE	0	0	@	%V	P	P	‘	%W	p	+P
SOH	$A	DC1	$Q	!	/A	1	1	A	A	Q	Q	a	+A	q	+Q
STX	$B	DC2	$R	“	/B	2	2	B	B	R	R	b	+B	r	+R
ETX	$C	DC3	$S	#	/C	3	3	C	C	S	S	c	+C	s	+S
EOT	$D	DC4	$T	$	/D	4	4	D	D	T	T	d	+D	t	+T
ENQ	$E	NAK	$U	%	/E	5	5	E	E	U	U	e	+E	u	+U
ACK	$F	SYN	$V	&	/F	6	6	F	F	V	V	f	+F	v	+V
BEL	$G	ETB	$W	‘	/G	7	7	G	G	W	W	g	+G	w	+W
BS	$H	CAN	$X	(	/H	8	8	H	H	X	X	h	+H	x	+X
HT	$I	EM	$Y	)	/I	9	9	I	I	Y	Y	i	+I	y	+Y
LF	$J	SUB	$Z	*	/J	:	/Z	J	J	Z	Z	j	+J	z	+Z
VT	$K	ESC	%A	+	/K	;	%F	K	K	[	%K	k	+K	{	%P
FF	$L	FS	%B	,	/L	<	%G	L	L	\	%L	l	+L	l	%Q
CR	$M	GS	%C	-	-	=	%H	M	M	]	%M	m	+M	}	%R
SO	$N	RS	%D	.	.	>	%I	N	N	^	%N	n	+N	~	%S
SI	$O	US	%E	/	/O	?	%J	O	O	_	%O	o	+O	DEL	%T

Character pairs /M and /N decode as a minus sign and period respectively. Character pairs /P through /Y decode as 0 through 9.

C39ASC1.

Full ASCII On

C39ASC0.

*** Full ASCII Off**

Code 39 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created from the chart,

ASCII Conversion Chart (Code Page 1252), page A-3, and scan the value and the **Save** bar code from the inside the back cover of this manual. The data characters should then appear properly.

C39DCP.

Code 39 Code Page

Interleaved 2 of 5

< Default All Interleaved 2 of 5 Settings >

I25DFT.

Interleaved 2 of 5

I25ENA1.

*** On**

I25ENA0.

Off

Check Digit

No Check Digit indicates that the scanner reads and transmits bar code data with or without a check digit.

When Check Digit is set to **Validate, but Don't Transmit**, the unit only reads Interleaved 2 of 5 bar codes printed with a check digit, but will not transmit the check digit with the scanned data.

When Check Digit is set to **Validate and Transmit**, the scanner only reads Interleaved 2 of 5 bar codes printed with a check digit, and will transmit this digit at the end of the scanned data. *Default = No Check Digit.*

I25CK20.

*** No Check Digit**

I25CK21.

Validate, but Don't Transmit

I25CK22.

Validate and Transmit

Interleaved 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

I25MIN.

Minimum Message Length

I25MAX.

Maximum Message Length

Code 93

< Default All Code 93 Settings >

C93DFT.

Code 93

C93ENA1.

*** On**

C93ENA0.

Off

Code 93 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

C93MIN.

Minimum Message Length

C93MAX.

Maximum Message Length

Code 93 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below,

select the code page with which the bar codes were created from the chart, ASCII Conversion Chart (Code Page 1252), page A-3, and scan the value and the **Save** bar code from the inside the back cover of this manual. The data characters should then appear properly.

C93DCP.

Code 93 Code Page

Straight 2 of 5 Industrial (three-bar start/stop)

<Default All Straight 2 of 5 Settings>

R25DFT.

Straight 2 of 5 Industrial

R25ENA1.

*** On**

R25ENA0.

Off

Straight 2 of 5 Industrial Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

R25MIN.

Minimum Message Length

R25MAX.

Maximum Message Length

Straight 2 of 5 IATA (two-bar start/stop)

<Default All Code IATA 2 of 5 Settings>

A25DFT.

Straight 2 of 5 IATA

A25ENA1.

On

A25ENA0.

Off

Straight 2 of 5 IATA Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

A25MIN.

Minimum Message Length

A25MAX.

Maximum Message Length

Matrix 2 of 5

<Default All Matrix 2 of 5 Settings>

X25DFT.

Matrix 2 of 5

X25ENA1.

On

X25ENA0.

*** Off**

Matrix 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

X25MIN.

Minimum Message Length

X25MAX.

Maximum Message Length

Code 11

<Default All Code 11 Settings>

C11DFT.

Code 11

C11ENA1.

On

C11ENA0.

*** Off**

Check Digits Required

This option sets whether 1 or 2 check digits are required with Code 11 bar codes. *Default = Two Check Digits.*

C11CK20.

One Check Digit

C11CK21.

*** Two Check Digits**

Code 11 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

C11MIN.

Minimum Message Length

C11MAX.

Maximum Message Length

Code 128

<Default All Code 128 Settings>

128DFT.

Code 128

128ENA1.

*** On**

128ENA0.

Off

ISBT 128 Concatenation

In 1994 the International Society of Blood Transfusion (ISBT) ratified a standard for communicating critical blood information in a uniform manner. The use of ISBT formats requires a paid license. The ISBT 128 Application Specification describes 1) the critical data elements for labeling blood products, 2) the current recommendation to use Code 128 due to its high degree of security and its

space-efficient design, 3) a variation of Code 128 that supports concatenation of neighboring symbols, and 4) the standard layout for bar codes on a blood product label. Use the bar codes below to turn concatenation on or off. *Default =Off.*

ISBENA1.

On

ISBENA0.

*** Off**

Code 128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

128MIN.

Minimum Message Length

128MAX.

Maximum Message Length

Code 128 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created from the chart, ASCII Conversion Chart (Code Page 1252), page A-3, and scan the value and the **Save** bar code from the inside the back cover of this manual. The data characters should then appear properly.

128DCP.

Code 128 Code Page

Code 128 Function Code Transmit

By default, Code 128 function codes are not transmitted with Code 128 bar code data. However, if you wish to transmit Code 128 function codes with the bar code data, scan the **Function Codes On** bar code, below. *Default = Off*

128FNX0.

*** Function Codes Off**

128FNX1.

Function Codes On

Telepen

<Default All Telepen Settings>

TELDFT.

Telepen

TELENA1.

On

TELENA0.

*** Off**

Telepen Output

Using AIM Telepen Output, the scanner reads symbols with start/stop pattern 1 and decodes them as standard full ASCII (start/stop pattern 1). When Original Telepen Output is selected, the scanner reads symbols with start/stop pattern 1 and decodes them as compressed numeric with optional full ASCII (start/stop pattern 2). *Default = AIM Telepen Output.*

TELOLD0.

***AIM Telepen Output**

TELOLD1.

Original Telepen Output

Telepen Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 1-60. Minimum Default = 1, Maximum Default = 60.

TELMIN.

Minimum Message Length

TELMAX.

Maximum Message Length

UPC A

<Default All UPC A Settings>

UPADFT.

UPC A

UPAENA1.

*** On**

UPAENA0.

Off

UPC A Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. *Default = On*.

UPACKX1.

*** On**

UPACKX0.

Off

UPC A Number System

The numeric system digit of a U.P.C. symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will not transmit it. *Default = On.*

UPANSX1.

*** On**

UPANSX0.

Off

UPC A Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC A data.
Default = Off for both 2 Digit and 5 Digit Addenda.

UPAAD21.

2 Digit Addenda On

UPAAD20.

*** 2 Digit Addenda Off**

UPAAD51.

5 Digit Addenda On

UPAAD50.

*** 5 Digit Addenda Off**

UPC A Addenda Required

When Addenda Required is set to on, the scanner will only read UPC A bar codes that have addenda. *Default = Not Required.*

UPAARQ1.

Required

UPAARQ0.

*** Not Required**

UPC A Addenda Separator

When this feature is on, there is a space between the data from the bar code and the data from the addenda. When turned off, there is no space.
Default = On.

UPAADS1.

*** On**

UPAADS0.

Off

UPC-A/EAN-13 with Extended Coupon Code

Use the following codes to enable or disable UPC-A **and** EAN-13 with Extended Coupon Code. *Default = On.*

CPNENA1.

On

CPNENA0.

*** Off**

UPC E

<Default All UPC E Settings>

UPEDFT.

UPC E0 and UPC E1

Most U.P.C. bar codes lead with the 0 number system. For these codes, use the UPC E0 selection. If you need to read codes that lead with the 1 number system, use the UPC E1 selection. *Default = On (UPC E0) and Off (UPC E1).*

UPEEN01.

*** UPC E0 On**

UPEEN00.

UPC E0 Off

UPEEN11.

UPC E1 On

UPEEN10.

*** UPC E1 Off**

UPC E0 and UPC E1 Expand

UPC E Expand expands the UPC E code to the 12 digit, UPC A format. *Default = Off.*

UPEEXP1.

On

UPEEXP0.

*** Off**

UPC E0 and UPC E1 Addenda Required

When Addenda Required is set to on, the scanner will only read UPC E bar codes that have addenda. *Default = Not Required.*

UPEARQ1.

Required

UPEARQ0.

*** Not Required**

UPC E0 and UPC E1 Addenda Separator

When this feature is on, there is a space between the data from the bar code and the data from the addenda. When turned off, there is no space.
Default = On.

UPEADS1.

*** On**

UPEADS0.

Off

UPC E0 Check Digit

Check Digit specifies whether the check digit should be transmitted at the end of the scanned data or not. *Default = On.*

UPECKX1.

*** On**

UPECKX0.

Off

UPC E0 Number System

The numeric system digit of a U.P.C. symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will not transmit it. *Default = On.*

UPENSX1.

*** On**

UPENSX0.

Off

UPC E0 Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC E data. *Default = Off for both 2 Digit and 5 Digit Addenda.*

UPEAD21.

2 Digit Addenda On

UPEAD20.

*** 2 Digit Addenda Off**

UPEAD51.

5 Digit Addenda On

UPEAD50.

*** 5 Digit Addenda Off**

EAN/JAN 13

<Default All EAN/JAN Settings>

E13DFT.

EAN/JAN 13

E13ENA1.

*** On**

E13ENA0.

Off

EAN/JAN 13 Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. *Default = On.*

E13CKX1.

*** On**

E13CKX0.

Off

EAN/JAN 13 Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN/JAN 13 data. *Default = Off for both 2 Digit and 5 Digit Addenda.*

E13AD21.

2 Digit Addenda On

E13AD20.

*** 2 Digit Addenda Off**

E13AD51.

5 Digit Addenda On

E13AD50.

*** 5 Digit Addenda Off**

EAN/JAN 13 Addenda Required

When Addenda Required is set to on, the scanner will only read EAN/JAN 13 bar codes that have addenda. *Default = Not Required.*

E13ARQ1.

Required

E13ARQ0.

*** Not Required**

EAN/JAN 13 Addenda Separator

When this feature is on, there is a space between the data from the bar code and the data from the addenda. When turned off, there is no space. *Default = On.*

E13ADS1.

*** On**

E13ADS0.

Off

Note: If you want to enable or disable EAN13 with Extended Coupon Code, refer to *UPC-A/EAN-13 with Extended Coupon Code on page 6-27.*

ISBN Translate

This selection causes EAN-13 Bookland symbols to be translated into their equivalent ISBN number format. *Default = Off.*

E13ISB1.

On

E13ISB0.

*** Off**

EAN/JAN 8

<Default All EAN/JAN 8 Settings>

EA8DFT.

EAN/JAN 8

EA8ENA1.

* **On**

EA8ENA0.

Off

EAN/JAN 8 Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. *Default = On.*

EA8CKX1.

* **On**

EA8CKX0.

Off

EAN/JAN 8 Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN/JAN 8 data. *Default = Off for both 2 Digit and 5 Digit Addenda.*

EA8AD21.

2 Digit Addenda On

EA8AD20.

*** 2 Digit Addenda Off**

EA8AD51.

5 Digit Addenda On

EA8AD50.

*** 5 Digit Addenda Off**

EAN/JAN 8 Addenda Required

When Addenda Required is set to on, the scanner will only read EAN/JAN 8 bar codes that have addenda. *Default = Not Required.*

EA8ARQ1.

Required

EA8ARQ0.

*** Not Required**

EAN/JAN 8 Addenda Separator

When this feature is on, there is a space between the data from the bar code and the data from the addenda. When turned off, there is no space.
Default = On.

EA8ADS1.

*** On**

EA8ADS0.

Off

MSI

<Default All MSI Settings>

MSIDFT.

MSI

MSIENA1.

On

MSIENA0.

*** Off**

MSI Check Character

Different types of check characters are used with MSI bar codes. You can program the scanner to read MSI bar codes with Type 10 check characters.
Default = Validate Type 10, but Don't Transmit.

When Check Character is set to ***Validate and Transmit***, the scanner will only read MSI bar codes printed with the specified type check character, and will transmit this character at the end of the scanned data.

When Check Character is set to ***Validate, but Don't Transmit***, the unit will only read MSI bar codes printed with the specified type check character, but will not transmit the check character with the scanned data.

MSICHK0.

*** Validate Type 10, but Don't Transmit**

MSICHK1.

Validate Type 10 and Transmit

MSI Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.

MSIMIN.

Minimum Message Length

MSIMAX.

Maximum Message Length

Plessey Code

<Default All Plessey Code Settings>

PLSDFT.

Plessey Code

PLSENA1.

On

PLSENA0.

*** Off**

Plessey Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.

PLSMIN.

Minimum Message Length

PLSMAX.

Maximum Message Length

GS1 DataBar Omnidirectional

< Default All GS1 DataBar Omnidirectional Settings >

RSSDFT.

GS1 DataBar Omnidirectional

RSSENA1.

*** On**

RSSENA0.

Off

GS1 DataBar Limited

< Default All GS1 DataBar Limited Settings >

RSLDFT.

GS1 DataBar Limited

RSLENA1.

*** On**

RSLENA0.

Off

GS1 DataBar Expanded

< Default All GS1 DataBar Expanded Settings >

RSEDFT.

GS1 DataBar Expanded

RSEENA1.

*** On**

RSEENA0.

Off

GS1 DataBar Expanded Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 4-74. Minimum Default = 4, Maximum Default = 74.

RSEMIN.

Minimum Message Length

RSEMAX.

Maximum Message Length

China Post Code

<Default All China Post Code Settings>

CPCDFT.

China Post Code

CPCENA1.

On

CPCENA0.

*** Off**

China Post Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

CPCMIN.

Minimum Message Length

CPCMAX.

Maximum Message Length

Korea Post Code

<Default All Korea Post Code Settings>

KPCDFT.

Korea Post Code

KPCENA1.

On

KPCENA0.

* Off

Korea Post Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 48.

KPCMIN.

Minimum Message Length

KPCMAX.

Maximum Message Length

Codablock F

<Default All Codablock F Settings>

CBFDFT.

Codablock F

CBFENA1.

On

CBFENA0.

*** Off**

Codablock F Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 1-2048. Minimum Default = 1, Maximum Default = 2048.

CBFMIN.

Minimum Message Length

CBFMAX.

Maximum Message Length

Code 49

<Default All Code 49 Settings>

C49DFT.

Code 49

C49ENA1.

On

C49ENA0.

*** Off**

Code 49 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 6-2 for additional information. Minimum and Maximum lengths = 1-81. Minimum Default = 1, Maximum Default = 81.

C49MIN.

Minimum Message Length

C49MAX.

Maximum Message Length

Trioptic Code

Trioptic Code is used for labeling magnetic storage media.

TRIENA1.

On

TRIENA0.

Off

GS1 Emulation

The scanner can automatically format the output from any GS1 data carrier to emulate what would be encoded in an equivalent GS1-128 or GS1 DataBar symbol. GS1 data carriers include UPC-A and UPC-E, EAN-13 and EAN-8, ITF-14, GS1-128, and GS1-128 DataBar and GS1Composites. If GS1-128 Emulation is selected, the AIM Symbology Identifier will be reported as "]C1". If GS1 DataBar Emulation is selected, the AIM Symbology Identifier will be reported as "]e0." Any application that accepts GS1 data can be simplified since it only needs to recognize one data carrier type. *Default = GS1 Emulation Off*.

EANEMU2.

GS1 Data Bar Emulation

EANEMU1.

GS1-128 Emulation

EANEMU0.

*** GS1 Emulation Off**

Label Code

The standard Label Code is used in library situations. *Default = Off.*

LBLENA1.

On

LBLENA0.

* Off

7 Interface Keys

Keyboard Function Relationships

The following Keyboard Function Code, Hex/ASCII Value, and Full ASCII "CTRL"+ relationships apply to all terminals that can be used with the scanner. Refer to Windows Mode Control + X Mode On (page 2-20) to enable Control + ASCII mode.

Function Code	HEX/ASCII Value	Full ASCII "CTRL" +
NUL	00	2
SOH	01	A
STX	02	B
ETX	03	C
EOT	04	D
ENQ	05	E
ACK	06	F
BEL	07	G
BS	08	H
HT	09	I
LF	0A	J
VT	0B	K
FF	0C	L
CR	0D	M
SO	0E	N
SI	0F	O
DLE	10	P
DC1	11	Q
DC2	12	R
DC3	13	S
DC4	14	T
NAK	15	U
SYN	16	V
ETB	17	W
CAN	18	X
EM	19	Y
SUB	1A	Z
ESC	1B	[
FS	1C	\
GS	1D	]
RS	1E	6
US	1F	-

Supported Interface Keys

ASCII	**HEX**	IBM AT/XT and PS/2 Compatibles, WYSE PC/AT Supported Keys
NUL	00	Reserved
SOH	01	Enter (KP)
STX	02	Cap Lock
ETX	03	ALT make
EOT	04	ALT break
ENQ	05	CTRL make
ACK	06	CTRL break
BEL	07	CR/Enter
BS	08	Reserved
HT	09	Tab
LF	0A	Reserved
VT	0B	Tab
FF	0C	Delete
CR	0D	CR/Enter
SO	0E	Insert
SI	0F	Escape
DLE	10	F11
DC1	11	Home
DC2	12	Print
DC3	13	Back Space
DC4	14	Back Tab
NAK	15	F12
SYN	16	F1
ETB	17	F2
CAN	18	F3
EM	19	F4
SUB	1A	F5
ESC	1B	F6
FS	1C	F7
GS	1D	F8
RS	1E	F9
US	1F	F10

* IBM 3191/92, 3471/72, 3196/97, 3476/77, Telex (all models)

Supported Interface Keys

ASCII	**HEX**	Apple Mac/iMac Supported Keys
NUL	00	Reserved
SOH	01	Enter/Numpad Enter
STX	02	CAPS
ETX	03	ALT make
EOT	04	ALT break
ENQ	05	CNTRL make
ACK	06	CNTRL break
BEL	07	RETURN
BS	08	APPLE make
HT	09	TAB
LF	0A	APPLE break
VT	0B	TAB
FF	0C	Del
CR	0D	RETURN
SO	0E	Ins Help
SI	0F	ESC
DLE	10	F11
DC1	11	Home
DC2	12	Prnt Scrn
DC3	13	BACKSPACE
DC4	14	LSHIFT TAB
NAK	15	F12
SYN	16	F1
ETB	17	F2
CAN	18	F3
EM	19	F4
SUB	1A	F5
ESC	1B	F6
FS	1C	F7
GS	1D	F8
RS	1E	F9
US	1F	F10
DEL	7F	BACKSPACE

8 Utilities

To Add a Test Code I.D. Prefix to All Symbologies

This selection allows you to turn on transmission of a Code I.D. before the decoded symbology. (See the Symbology Charts (page A-1) for the single character code that identifies each symbology.) This action first clears all current prefixes, then programs a Code I.D. prefix for all symbologies. This is a temporary setting that will be removed when the unit is power cycled.

PRECA2,BK2995C80!

Add Code I.D. Prefix to All Symbologies (Temporary)

Show Software Revision

Scan the bar code below to output the current software revision, unit serial number, and other product information.

REVINF.

Show Revision

Show Data Format

Scan the bar code below to show current data format settings.

DFMBK3?.

Data Format Settings

EZConfig-Scanning Introduction

EZConfig-Scanning provides a wide range of PC-based programming functions that can be performed on a scanner connected to your PC's COM port. EZConfig-Scanning allows you to download upgrades to the scanner's firmware,

change programmed parameters, and create and print programming bar codes. Using EZConfig-Scanning, you can even save/open the programming parameters for a scanner. This saved file can be e-mailed or, if required, you can create a single bar code that contains all the customized programming parameters and mail or fax that bar code to any location. Users in other locations can scan the bar code to load in the customized programming.

To communicate with a scanner, EZConfig-Scanning requires that the PC have at least one available serial communication port, or a serial port emulation using a physical USB port. If you are using the serial port and RS232 cable, an external power supply is required. When using a USB serial port emulation, only a USB cable is required.

EZConfig-Scanning Operations

The EZConfig-Scanning software performs the following operations:

Scan Data

Scan Data allows you to scan bar codes and display the bar code data in a window. Scan Data lets you send serial commands to the scanner and receive scanner response that can be seen in the Scan Data window. The data displayed in the Scan Data window can either be saved in a file or printed.

Configure

Configure displays the programming and configuration data of the scanner. The scanner's programming and configuration data is grouped into different categories. Each category is displayed as a tree item under the "Configure" tree node in the application explorer. When one of these tree nodes is clicked, the right-hand side is loaded with the parameters' form belonging to that particular category. The "Configure" tree option has all the programming and configuration parameters specified for a scanner. You can set or modify these parameters as required. You can later write the modified settings to the scanner, or save them to a dcf file.

Installing EZConfig-Scanning from the Web

1. Access the Honeywell web site at www.honeywellaidc.com
2. Click on the **Resources** tab. Select **Download**.
3. Click on the dropdown for **Select Product Number** and select the number of your product.
4. Under **Tools and Utilities**, click on the listing for **EZConfig for Scanning**.

5. Follow the security directions as prompted on the screen and click on **Download**.

6. When prompted, select **Save**, and save the file to your desktop.

7. Double click on the **EZConfig-Scanning** zip file.

8. Double click on the **EZConfig-Scanning Setup.exe** file. Select **Extract All**.

9. Go to the **EZConfig-Scanning** folder that has been created on your desktop and double click on the **EZConfig-Scanning Setup.exe** file.

10. Follow the screen prompts to install the EZConfig-Scanning program.

11. If you've selected the defaults during installation, you can click on the shortcut on your desktop to start EZConfig for Scanning.

Once the software is installed, you may delete the zip file and the EZConfig-Scanning folder from your desktop.

Resetting the Standard Product Defaults

This selection erases all your settings and resets the scanner to the original factory defaults.

If you aren't sure what programming options are in your scanner, or you've changed some options and want to restore the scanner to factory default settings, first scan the **Remove Custom Defaults** bar code, then scan **Activate Defaults**. This resets the scanner to the factory default settings.

DEFOVR.

Remove Custom Defaults

DEFALT.

Activate Defaults

The Serial Programming Commands, beginning on page 9-1 lists the standard product default settings for each of the commands (indicated by an asterisk (*) on the programming pages).

9 Serial Programming Commands

The serial programming commands can be used in place of the programming bar codes. Both the serial commands and the programming bar codes will program the scanner. For complete descriptions and examples of each serial programming command, refer to the corresponding programming bar code in this manual.

The device must be set to an RS-232 interface (see page 2-2). The following commands can be sent via a PC com port using terminal emulation software.

Conventions

The following conventions are used for menu and query command descriptions:

parameter A label representing the actual value you should send as part of a command.

[*option*] An optional part of a command.

{Data} Alternatives in a command.

bold Names of menus, menu commands, buttons, dialog boxes, and windows that appear on the screen.

Menu Command Syntax

Menu commands have the following syntax (spaces have been used for clarity only):

Prefix Tag SubTag {Data} [, SubTag {Data}] [; Tag SubTag {Data}] […] Storage

Prefix	Three ASCII characters: **SYN M CR** (ASCII 22,77,13).
Tag	A 3 character case-insensitive field that identifies the desired menu command group. For example, all RS-232 configuration settings are identified with a Tag of **232**.
SubTag	A 3 character case-insensitive field that identifies the desired menu command within the tag group. For example, the SubTag for the RS-232 baud rate is **BAD**.
Data	The new value for a menu setting, identified by the Tag and SubTag.
Storage	A single character that specifies the storage table to which the command is applied. An exclamation point (**!**) performs the command's operation on the device's volatile menu configuration table. A period (**.**) performs the command's operation on the device's non-volatile menu configuration table. Use the non-volatile table only for semi-permanent changes you want saved through a power cycle.

Query Commands

Several special characters can be used to query the device about its settings.

- **^** What is the default value for the setting(s).
- **?** What is the device's current value for the setting(s).
- ***** What is the range of possible values for the setting(s). (The device's response uses a dash (**-**) to indicate a continuous range of values. A pipe (**|**) separates items in a list of non-continuous values.)

Tag Field Usage

When a query is used in place of a Tag field, the query applies to the *entire* set of commands available for the particular storage table indicated by the Storage field of the command. In this case, the SubTag and Data fields should not be used because they are ignored by the device.

SubTag Field Usage

When a query is used in place of a SubTag field, the query applies only to the subset of commands available that match the Tag field. In this case, the Data field should not be used because it is ignored by the device.

Data Field Usage

When a query is used in place of the Data field, the query applies only to the specific command identified by the Tag and SubTag fields.

Concatenation of Multiple Commands

Multiple commands can be issued within one Prefix/Storage sequence. Only the Tag, SubTag, and Data fields must be repeated for each command in the sequence. If additional commands are to be applied to the same Tag, then the new command sequence is separated with a comma (**,**) and only the SubTag and Data fields of the additional command are issued. If the additional command requires a different Tag field, the command is separated from previous commands by a semicolon (**;**).

Responses

The device responds to serial commands with one of three responses:

ACK Indicates a good command which has been processed.

ENQ Indicates an invalid Tag or SubTag command.

NAK Indicates the command was good, but the Data field entry was out of the allowable range for this Tag and SubTag combination, e.g., an entry for a minimum message length of 100 when the field will only accept 2 characters.

When responding, the device echoes back the command sequence with the status character inserted directly before each of the punctuation marks (the period, exclamation point, comma, or semicolon) in the command.

Examples of Query Commands

In the following examples, a bracketed notation [ ] depicts a non-displayable response.

Example: Example #1:What is the range of possible values for Codabar Coding Enable?

Enter: **cbrena*.**

Response: **CBRENA0-1[ACK]**

This response indicates that Codabar Coding Enable (CBRENA) has a range of values from 0 to 1 (off and on).

Example: Example #2: What is the default value for Codabar Coding Enable?

Enter: **cbrena^.**

Response: **CBRENA1[ACK]**

This response indicates that the default setting for Codabar Coding Enable (CBRENA) is 1, or on.

Example: Example #3: What is the device's current setting for Codabar Coding Enable?

Enter: **cbrena?.**

Response: **CBRENA1[ACK]**

This response indicates that the device's Codabar Coding Enable (CBRENA) is set to 1, or on.

Example: Example #4: What are the device's settings for all Codabar selections?

Enter: **cbr?.**

Response: **CBRENA1[ACK],**
SSX0[ACK],
CK20[ACK],
CCT1[ACK],
MIN2[ACK],
MAX60[ACK],
DFT[ACK].

This response indicates that the device's Codabar Coding Enable (CBRENA) is set to 1, or on;
the Start/Stop Character (SSX) is set to 0, or Don't Transmit;
the Check Character (CK2) is set to 0, or Not Required;
concatenation (CCT) is set to 1, or Enabled;
the Minimum Message Length (MIN) is set to 2 characters;
the Maximum Message Length (MAX) is set to 60 characters;
and the Default setting (DFT) has no value.

Trigger Commands

You can activate and deactivate the scanner with serial trigger commands. First, the scanner must be put in Manual/Serial Trigger Mode either by scanning the Manual/Serial Trigger Mode bar code (page 3-5), or by sending the Manual/ Serial Menu Command (page 9-13). Once the scanner is in serial trigger mode, the trigger is activated and deactivated by sending the following commands:

Activate:**SYN T CR**

Deactivate:**SYN U CR**

The scanner scans until a bar code has been read, until the deactivate command is sent, or until the serial time-out has been reached (see Read Time-Out on page 3-5 for a description, and the serial command on page 9-13).

Resetting the Standard Product Defaults

If you aren't sure what programming options are in your scanner, or you've changed some options and want the factory settings restored, scan the ***Standard Product Default Settings*** bar code below.

DEFALT.

Standard Product Default Settings

The chart on the following pages lists the factory default settings for each of the menu commands (indicated by an asterisk (*) on the programming pages).

Menu Commands

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Product Default Settings			
Setting Custom Defaults	Set Custom Defaults	MNUCDF	1-5
Resetting the Custom Defaults	Activate Custom Defaults	DEFALT	1-5
Programming the Interface			
Plug and Play Codes	Keyboard Wedge: IBM PC AT and Compatibles with CR suffix	PAP_AT	2-1
	Laptop Direct Connect	PAPLTD	2-1
	RS232 Serial Port	PAP232	2-2
Plug and Play Codes: RS485	IBM Port 5B Interface	PAPP5B	2-2
	IBM Port 9B HHBCR-1 Interface	PAP9B1	2-2
	IBM Port 17 Interface	PAPP17	2-2
	IBM Port 9B HHBCR-2 Interface	PAP9B2	2-2
	OPOS Mode	PAPOPS	2-2
Plug and Play Codes: IBM SurePos	USB IBM SurePos Handheld	PAPSPH	2-4
	USB IBM SurePos Tabletop	PAPSPT	2-4
Plug and Play Codes: USB	USB Keyboard (PC)	PAP124	2-5
	USB Keyboard (Mac)	PAP125	2-5
	USB HID POS	PAP131	2-5

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
USB Serial Commands	USB Serial Emulation	PAP130	2-5
	CTS/RTS Emulation On	USBCTS1	2-6
	*CTS/RTS Emulation Off	USBCTS0	2-6
	ACK/NAK Mode On	USBACK1	2-6
	*ACK/NAK Mode Off	USBACK0	2-6
Plug and Play Codes:	Honeywell Bioptic Aux Port	PAPBIO	2-6
	Datalogic Magellan Bioptic Aux Port	PAPMAG	2-7
	Wincor Mode A	PAPWMA	2-7
Program Keyboard Country	*U.S.A.	KBDCTY0	2-8
	Albania	KBDCTY35	2-8
	Arabic	KBDCTY91	2-8
	Azeri (Cyrillic)	KBDCTY81	2-8
	Azeri (Latin)	KBDCTY80	2-8
	Belarus	KBDCTY82	2-8
	Belgium	KBDCTY1	2-8
	Bosnia	KBDCTY33	2-8
	Brazil	KBDCTY16	2-9
	Brazil (MS)	KBDCTY59	2-9
	Bulgaria (Cyrillic)	KBDCTY52	2-9
	Bulgaria (Latin)	KBDCTY53	2-9
	Canada (French legacy)	KBDCTY54	2-9
	Canada (French)	KBDCTY18	2-9
	Canada (Multilingual)	KBDCTY55	2-9
	China	KBDCTY92	2-9
	Croatia	KBDCTY32	2-9
	Czech	KBDCTY15	2-10

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
	Czech (Programmers)	KBDCTY40	2-10
	Czech (QWERTY)	KBDCTY39	2-10
	Czech (QWERTZ)	KBDCTY38	2-10
	Denmark	KBDCTY8	2-10
	Dutch (Netherlands)	KBDCTY11	2-10
	Estonia	KBDCTY41	2-10
	Faroese	KBDCTY83	2-10
	Finland	KBDCTY2	2-10
	France	KBDCTY3	2-11
	Gaelic	KBDCTY84	2-11
	Germany	KBDCTY4	2-11
	Greek	KBDCTY17	2-11
	Greek (220 Latin)	KBDCTY64	2-11
	Greek (220)	KBDCTY61	2-11
	Greek (319 Latin)	KBDCTY65	2-11
	Greek (319)	KBDCTY62	2-11
	Greek (Latin)	KBDCTY63	2-11
	Greek (MS)	KBDCTY66	2-12
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	Hebrew	KBDCTY12	2-12
	Hungarian (101 key)	KBDCTY50	2-12
	Hungary	KBDCTY19	2-12
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	Italy	KBDCTY5	2-12
	Japan ASCII	KBDCTY28	2-13
	Kazakh	KBDCTY78	2-13
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Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
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	Lithuania	KBDCTY44	2-13
	Lithuania (IBM)	KBDCTY45	2-13
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	4 Characters	KBDALT0	2-18
Keyboard Style	*Regular	KBDALT7	2-18
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Selection	Setting *** Indicates default***	Serial Command *# Indicates a numeric entry*	Page
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	*Auto Direct Conn. Off	KBDADC0	2-21
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	600 BPS	232BAD1	2-22
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	2400 BPS	232BAD3	2-22
	4800 BPS	232BAD4	2-22
	9600 BPS	232BAD5	2-22
	19200 BPS	232BAD6	2-22
	*38400 BPS	232BAD7	2-23
	57600 BPS	232BAD8	2-23
	115200 BPS	232BAD9	2-23
Word Length: Data Bits, Stop Bits, and Parity	7 Data, 1 Stop, Parity None	232WRD0	2-23
	7 Data, 1 Stop, Parity Even	232WRD3	2-23
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Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
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RS-232 Handshaking	*RTS/CTS Off	232CTS0	2-25
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Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
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	Low	BEPLVL1	3-1
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	*Medium (2750 Hz)	BEPFQ12750	3-2
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Beeper Duration - Good Read	*Normal Beep	BEPBIP0	3-2
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Good Read Delay	*No Delay	DLYGRD0	3-4
	Short Delay (500 ms)	DLYGRD500	3-4
	Medium Delay (1000 ms)	DLYGRD1000	3-4
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User-Specified Good Read Delay	Range 0 - 30,000 ms	DLYGRD#####	3-4

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
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	Read Time-Out (0 - 300,000 ms) *30,000	TRGSTO####	3-5
	Automatic Trigger	TRGMOD1	3-5
	Presentation Mode	TRGMOD3	3-6
	Continuous Illumination On	ILLAON1	3-6
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	Hands Free Time-Out (0-300,000 seconds) *5000	TRGPTO#### ##	3-7
Reread Delay	Short (500 ms)	DLYRRD500	3-7
	*Medium (750 ms)	DLYRRD750	3-7
	Long (1000 ms)	DLYRRD1000	3-7
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	*Off	SEQ_EN0	3-13
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Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
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	*Off	SHWNRD0	3-14
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Add CR Suffix to All Symbologies		VSUFCR	4-3
Prefix	Add Prefix	PREBK2##	4-3
	Clear One Prefix	PRECL2	4-3
	Clear All Prefixes	PRECA2	4-3
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Transmit Alternative Extended ASCII Characters	Transmit Alternate Extended ASCII	KBDEXT0	4-4
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Function Code Transmit	*Enable	RMVFNC0	4-6
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Data Format Editor	*Default Data Format (None)	DFMDF3	5-14
	Enter Data Format	DFMBK3##	5-14
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Selection	Setting *** Indicates default***	Serial Command ***# Indicates a numeric entry***	Page
Data Formatter	Off	DFM_EN0	5-15
	*On, but Not Required	DFM_EN1	5-15
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All Symbologies	All Symbologies Off	ALLENA0	6-2
	All Symbologies On	ALLENA1	6-2
Codabar	Default All Codabar Settings	CBRDFT	6-3
Codabar	Off	CBRENA0	6-3
	*On	CBRENA1	6-3
Codabar Start/Stop Char.	*Don’t Transmit	CBRSSX0	6-4
	Transmit	CBRSSX1	6-4
Codabar Check Char.	*No Check Char.	CBRCK20	6-4
	Validate, But Don’t Transmit	CBRCK21	6-4
	Validate, and Transmit	CBRCK22	6-4
Codabar Concatenation	*Off	CBRCCT0	6-5
	On	CBRCCT1	6-5
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Codabar Message Length	Minimum (2 - 60) *4	CBRMIN##	6-6
	Maximum (2 - 60) *60	CBRMAX##	6-6
Code 39	Default All Code 39 Settings	C39DFT	6-7
Code 39	Off	C39ENA0	6-7
	*On	C39ENA1	6-7
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	Transmit	C39SSX1	6-7
Code 39 Check Char.	*No Check Char.	C39CK20	6-8
	Validate, But Don’t Transmit	C39CK21	6-8
	Validate, and Transmit	C39CK22	6-8

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Code 39 Message Length	Minimum (0 - 48) *0	C39MIN##	6-8
	Maximum (0 - 48) *48	C39MAX##	6-8
Code 39 Append	*Off	C39APP0	6-9
	On	C39APP1	6-9
Code 32 Pharmaceutical (PARAF)	*Off	C39B320	6-9
	On	C39B321	6-9
Code 39 Full ASCII	*Off	C39ASC0	6-10
	On	C39ASC1	6-10
Interleaved 2 of 5	Default All Interleaved 2 of 5 Settings	I25DFT	6-11
Interleaved 2 of 5	Off	I25ENA0	6-11
	*On	I25ENA1	6-11
Interleaved 2 of 5 Check Digit	*No Check Char.	I25CK20	6-12
	Validate, But Don't Transmit	I25CK21	6-12
	Validate, and Transmit	I25CK22	6-12
Interleaved 2 of 5 Message Length	Minimum (2 - 80) *4	I25MIN##	6-12
	Maximum (2 - 80) *80	I25MAX##	6-12
Code 93	Default All Code 93 Settings	C93DFT	6-13
Code 93	Off	C93ENA0	6-13
	*On	C93ENA1	6-13
Code 93 Message Length	Minimum (0 - 80) *0	C93MIN##	6-13
	Maximum (0 - 80) *80	C93MAX##	6-13
Straight 2 of 5 Industrial	Default All Straight 2 of 5 Settings	R25DFT	6-15
Straight 2 of 5 Industrial	Off	R25ENA0	6-15
	*On	R25ENA1	6-15
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Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Straight 2 of 5 IATA	Default All Straight 2 of 5 IATA Settings	A25DFT	6-16
Straight 2 of 5 IATA	*Off	A25ENA0	6-16
	On	A25ENA1	6-16
Straight 2 of 5 IATA Message Length	Minimum (1 - 48) *4	A25MIN##	6-16
	Maximum (1 - 48) *48	A25MAX##	6-16
Matrix 2 of 5	Default All Matrix 2 of 5 Settings	X25DFT	6-17
Matrix 2 of 5	*Off	X25ENA0	6-17
	On	X25ENA1	6-17
Matrix 2 of 5 Message Length	Minimum (1 - 80) *4	X25MIN##	6-17
	Maximum (1 - 80) *80	X25MAX##	6-17
Code 11	Default All Code 11 Settings	C11DFT	6-18
Code 11	*Off	C11ENA0	6-18
	On	C11ENA1	6-18
Code 11 Check Digits Required	1 Check Digit	C11CK20	6-18
	*2 Check Digits	C11CK21	6-18
Code 11 Message Length	Minimum (1 - 80) *4	C11MIN##	6-19
	Maximum (1 - 80) *80	C11MAX##	6-19
Code 128	Default All Code 128 Settings	128DFT	6-19
Code 128	Off	128ENA0	6-20
	*On	128ENA1	6-19
ISBT Concatenation	On	ISBENA1	6-20
	*Off	ISBENA0	6-20
Code 128 Message Length	Minimum (0 - 80) *0	128MIN##	6-20
	Maximum (0 - 80) *80	128MAX##	6-20
Code 128 Code Page	Code 128 Code Page	128DCP	6-21

Selection	**Setting** ** Indicates default*	**Serial Command** *# Indicates a numeric entry*	**Page**
Code 128 Function Code Transmit	*Off	128FNX0	6-21
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Telepen	Default All Telepen Settings	TELDFT	6-22
Telepen	*Off	TELENA0	6-22
	On	TELENA1	6-22
Telepen Output	*AIM Telepen Output	TELOLD0	6-22
	Original Telepen Output	TELOLD1	6-22
Telepen Message Length	Minimum (1 - 60) *1	TELMIN##	6-23
	Maximum (1 - 60) *60	TELMAX##	6-23
UPC A	Default All UPC A Settings	UPADFT	6-24
UPC A	Off	UPAENA0	6-24
	*On	UPAENA1	6-24
UPC A Check Digit	Off	UPACKX0	6-24
	*On	UPACKX1	6-24
UPC A Number System	Off	UPANSX0	6-25
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UPC A 2 Digit Addenda	*Off	UPAAD20	6-25
	On	UPAAD21	6-25
UPC A 5 Digit Addenda	*Off	UPAAD50	6-25
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UPC A Addenda Required	*Not Required	UPAARQ0	6-26
	Required	UPAARQ1	6-26
UPC A Addenda Separator	Off	UPAADS0	6-26
	*On	UPAADS1	6-26
UPC-A/EAN-13 with Extended Coupon Code	*Off	CPNENA0	6-27
	On	CPNENA1	6-27

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
UPC E	Default All UPC E Settings	UPEDFT	6-28
UPC E0	Off	UPEEN00	6-28
	*On	UPEEN01	6-28
UPC E1	*Off	UPEEN10	6-28
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UPC E Expand	*Off	UPEEXP0	6-29
	On	UPEEXP1	6-29
UPC E Check Digit	Off	UPECKX0	6-30
	*On	UPECKX1	6-30
UPC E Number System	Off	UPENSX0	6-31
	*On	UPENSX1	6-31
UPC E 2 Digit Addenda	*Off	UPEAD20	6-31
	On	UPEAD21	6-31
UPC E 5 Digit Addenda	*Off	UPEAD50	6-31
	On	UPEAD51	6-31
UPC E Addenda Required	*Not Required	UPEARQ0	6-29
	Required	UPEARQ1	6-29
UPC E Addenda Separator	Off	UPEADS0	6-30
	*On	UPEADS1	6-30
EAN/JAN 13	Default All EAN/ JAN 13 Settings	E13DFT	6-32
EAN/JAN 13	Off	E13ENA0	6-32
	*On	E13ENA1	6-32
EAN/JAN 13 Check Digit	Off	E13CKX0	6-32
	*On	E13CKX1	6-32
EAN/JAN 13 2 Digit Addenda	*Off	E13AD20	6-33
	On	E13AD21	6-33
EAN/JAN 13 5 Digit Addenda	*Off	E13AD50	6-33
	On	E13AD51	6-33

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
EAN/JAN 13 Addenda Required	*Not Required	E13ARQ0	6-33
	Required	E13ARQ1	6-33
EAN/JAN 13 Addenda Separator	Off	E13ADS0	6-34
	*On	E13ADS1	6-34
ISBN Translate	*Off	E13ISB0	6-34
	On	E13ISB1	6-34
EAN/JAN 8	Default All EAN/ JAN 8 Settings	EA8DFT	6-35
EAN/JAN 8	Off	EA8ENA0	6-35
	*On	EA8ENA1	6-35
EAN/JAN 8 Check Digit	Off	EA8CKX0	6-35
	*On	EA8CKX1	6-35
EAN/JAN 8 2 Digit Addenda	*Off	EA8AD20	6-36
	On	EA8AD21	6-36
EAN/JAN 8 5 Digit Addenda	*Off	EA8AD50	6-36
	On	EA8AD51	6-36
EAN/JAN 8 Addenda Required	*Not Required	EA8ARQ0	6-29
	Required	EA8ARQ1	6-29
EAN/JAN 8 Addenda Separator	Off	EA8ADS0	6-37
	*On	EA8ADS1	6-37
MSI	Default All MSI Settings	MSIDFT	6-37
MSI	*Off	MSIENA0	6-37
	On	MSIENA1	6-37
MSI Check Character	*Validate Type 10, but Don’t Transmit	MSICHK0	6-38
	Validate Type 10 and Transmit	MSICHK1	6-38
MSI Message Length	Minimum (4 - 48) *4	MSIMIN##	6-38
	Maximum (4 - 48) *48	MSIMAX##	6-38
Plessey Code	Default All Plessey Settings	PLSDFT	6-39

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Plessey Code	*Off	PLSENA0	6-39
	On	PLSENA1	6-39
Plessey Message Length	Minimum (4 - 48) *4	PLSMIN##	6-39
	Maximum (4 - 48) *48	PLSMAX##	6-39
GS1 DataBar Omnidirectional	Default All GS1 DataBar Omnidirectional Settings	RSSDFT	6-40
GS1 DataBar Omnidirectional	Off	RSSENA0	6-40
	*On	RSSENA1	6-40
GS1 DataBar Limited	Default All GS1 DataBar Limited Settings	RSLDFT	6-40
GS1 DataBar Limited	Off	RSLENA0	6-40
	*On	RSLENA1	6-40
GS1 DataBar Expanded	Default All GS1 DataBar Expanded Settings	RSEDFT	6-41
GS1 DataBar Expanded	Off	RSEENA0	6-41
	*On	RSEENA1	6-41
GS1 DataBar Expanded Msg. Length	Minimum (4 - 74) *4	RSEMIN##	6-41
	Maximum (4 - 74) *74	RSEMAX##	6-41
China Post Code	Default All China Post Code Settings	CPCDFT	6-42
China Post Code	*Off	CPCENA0	6-42
	On	CPCENA1	6-42
China Post Code Msg. Length	Minimum (2 - 80) *4	CPCMIN##	6-42
	Maximum (2 - 80) *80	CPCMAX##	6-42
Korea Post Code	Default All Korea Post Code Settings	CPCDFT	6-43
Korea Post Code	*Off	CPCENA0	6-43
	On	CPCENA1	6-43

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Korea Post Code Msg. Length	Minimum (2 - 80) *4	CPCMIN##	6-43
	Maximum (2 - 80) *80	CPCMAX##	6-43
Codablock F	Default All Codablock F Settings	CBFDFT	6-44
Codablock F	*Off	CBFENA0	6-44
	On	CBFENA1	6-44
Codablock F Msg. Length	Minimum (1 - 2048) *1	CBFMIN####	6-44
	Maximum (1 - 2048) *2048	CBFMAX####	6-44
Code 49	Default All Code 49 Settings	C49DFT	6-45
Code 49	* Off	C49ENA0	6-45
	On	C49ENA1	6-45
Code 49	Minimum (1 - 81) *1	C49MIN##	6-45
	Maximum (1 - 81) *81	C49MAX##	6-45
GS1 Emulation	GS1 Emulation	EANEMU2	6-46
	GS1-128 Emulation	EANEMU1	6-46
	*GS1 Emulation Off	EANEMU0	6-46
Label Code	*Off	LBLENA0	6-47
	On	LBLENA1	6-47

10 Product Specifications

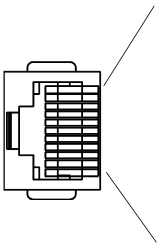
Hyperion 1300g Product Specifications

Parameter	Specification
Mechanical	
Height	5.9 inches (15 cm)
Length	4.4 inches (11.2 cm)
Width	3.1 inches (7.9 cm)
Weight	5.6 ounces (160 g)
Electrical	
LED source	630 nm visible red LED
Input Voltage	4.5-5.5VDC at imager
Operating Power	200mA @ 5V
Standby Power	125mA @5V
Environmental	
Operating Temperature	32° F to +122° F (0° C to +50° C)
Storage Temperature	-40° F to +140° F (-40° C to +60° C)
Humidity	0 to 95% non-condensing
Drop	Operational after 50 drops from 5 feet (1.5 m) to concrete
Environmental Sealing	IP41
Light Levels	70,000 lux
ESD	15 kV to any external surface
Sealant Rating	IP41
Scan Performance	
Scan Pattern	Single Line
Motion Tolerance	20 inches (51 cm) per second
Scan Rate	Up to 270 scans per second
Print Contrast	20%
Pitch, Skew	±65
Decode Capabilities	Reads standard 1D and GS1 DataBar symbologies
Optional External Power Supply Requirements	Use only a Listed Limited Power Source (LPS) or Class 2 type power supply with output rated 5 to 5.2Vdc, 1A

Standard Connector Pinouts

Keyboard Wedge

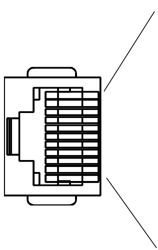
10 Pin RJ41 Modular Plug - connects to the scanner handle



1 Cable shield
2 Cable select
3 Supply ground
4 Terminal data
5 Terminal clock
6 Keyboard clock
7 +5V power
8 Keyboard data
9
10

Serial Output

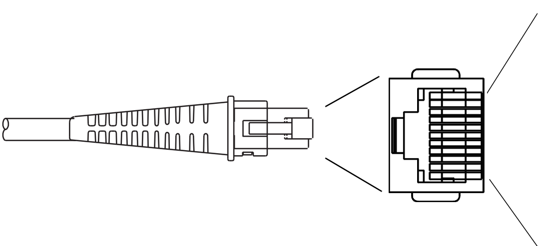
10 Pin RJ41 Modular Plug - connects to the scanner handle



1 Cable shield
2 Cable select
3 Supply ground
4 Transmit data
5 Receive data - serial data to scanner
6 CTS
7 +5V power
8 RTS
9
10

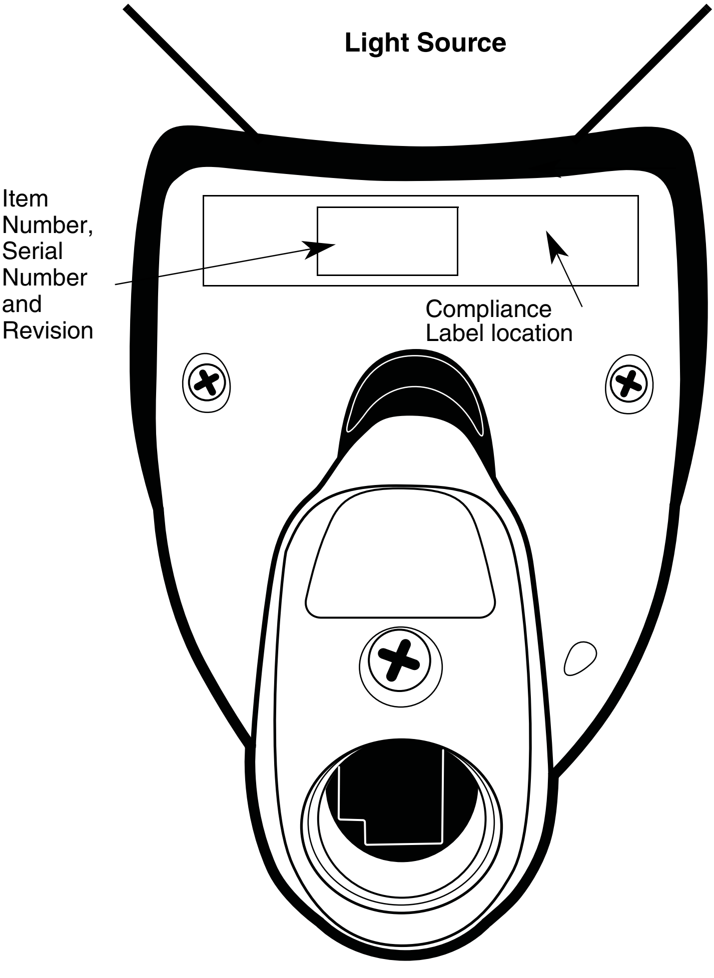
USB

10 Pin Modular Plug - connects to the scanner handle



1 Cable shield
2 Cable select
3 Supply ground
4
5
6
7 +5V power
8
9 Data +
10 Data -

Required Safety Label Locations



11 Maintenance

Repairs

Repairs and/or upgrades are not to be performed on this product. These services are to be performed only by an authorized service center. See Customer Support on page 12-1 for further information.

Maintenance

Your device provides reliable and efficient operation with a minimum of care. Although specific maintenance is not required, the following periodic checks ensure dependable scanner operation:

Cleaning the Device

Reading performance may degrade if the scanner's window is not clean. If the window is visibly dirty, or if the scanner isn't operating well, clean the window with a soft cloth or lens tissue dampened with water (or a mild soapy water solution). If a soapy water solution is used, rinse with a clean lens tissue dampened with water only.

The scanner's housing may also be cleaned the same way.

⚠ Caution:

Do not submerge the scanner in water. Do not use abrasive wipes or tissues on the scanner's window – abrasive wipes may scratch the window.

Never use solvents (e.g., acetone, benzene, ether, or phenol-based agents) on the housing or window – solvents may damage the finish or the window.

Inspecting Cords and Connectors

Inspect the scanner's interface cable and connector for wear or other signs of damage. A badly worn cable or damaged connector may interfere with scanner operation. Contact your Honeywell distributor for information about cable replacement. Cable replacement instructions are on page 11-2.

Replacing the Interface Cable

The standard interface cable is attached to the scanner with an 10-pin modular connector. When properly seated, the connector is held in the scanner's handle by a flexible retention tab. The interface cable is designed to be field replaceable.

- Order replacement cables from Honeywell or from an authorized distributor.
- When ordering a replacement cable, specify the cable part number of the original interface cable.

Replacing the Interface Cable:

1. Turn the power to the host system OFF.
2. Disconnect the scanner's cable from the terminal or computer.
3. Locate the small hole on the side of the scanner's handle. This is the cable release.
4. Straighten one end of a paper clip.
5. Insert the end of the paper clip into the small hole and press in. This depresses the retention tab, releasing the connector. Pull the connector out while maintaining pressure on the paper clip, then remove the paper clip.



6. Replace with the new cable. Insert the connector into the opening and press firmly. The connector is keyed to go in only one way, and will click into place.

Troubleshooting

The scanner automatically performs self-tests whenever you turn it on. If your scanner is not functioning properly, review the following Troubleshooting Guide to try to isolate the problem.

Is the power on? Is the aiming beam line on?

If the aiming beam line isn't illuminated, check that:

- The cable is connected properly.
- The host system power is on (if external power isn't used).
- The trigger works.

Is the scanner having trouble reading your symbols?

If the scanner isn't reading symbols well, check that the symbols:

- Aren't smeared, rough, scratched, or exhibiting voids.
- Aren't coated with frost or water droplets on the surface.
- Are enabled in the scanner or in the decoder to which the scanner connects.

Is the bar code displayed but not entered?

The bar code is displayed on the host device correctly, but you still have to press a key to enter it (the Enter/Return key or the Tab key, for example).

You need to program a suffix. Programming a suffix enables the scanner to output the bar code data plus the key you need (such as "CR") to enter the data into your application. Refer to Prefix/Suffix Overview on page 4-1 for further information.

Does the scanner read the bar code incorrectly?

If the scanner reads a bar code, but the data is not displayed correctly on the host screen:

- The scanner may not be programmed for the appropriate terminal interface. For example, you scan "12345" and the host displays "@es%."

  Reprogram the scanner with the correct Plug and Play or Terminal selection bar code. See Chapter 1 and Chapter 2.
- The scanner may not be programmed to output your bar code data properly. For example, you scan "12345" and the host displays "A12345B."

  Reprogram the scanner with the proper symbology selections. See Symbologies beginning on page 6-1.

The scanner won't read your bar code at all.

1. Scan the sample bar codes in the back of this manual. If the scanner reads the sample bar codes, check that your bar code is readable.
   Verify that your bar code symbology is enabled (see Symbologies beginning on page 6-1).

2. If the scanner still can't read the sample bar codes, scan All Symbologies on page 6-2.

If you aren't sure what programming options have been set in the scanner, or if you want the factory default settings restored, scan Resetting the Custom Defaults on page 1-5.

12 Customer Support

Technical Assistance

If you need assistance installing or troubleshooting your device, please contact us by using one of the methods below:

Knowledge Base: www.hsmknowledgebase.com

Our Knowledge Base provides thousands of immediate solutions. If the Knowledge Base cannot help, our Technical Support Portal (see below) provides an easy way to report your problem or ask your question.

Technical Support Portal: www.hsmsupportportal.com

The Technical Support Portal not only allows you to report your problem, but it also provides immediate solutions to your technical issues by searching our Knowledge Base. With the Portal, you can submit and track your questions online and send and receive attachments.

Web form: www.hsmcontactsupport.com

You can contact our technical support team directly by filling out our online support form. Enter your contact details and the description of the question/ problem.

Telephone: www.honeywellaidc.com/locations

For our latest contact information, please check our website at the link above.

Limited Warranty

Honeywell International Inc. ("HII") warrants its products and optional accessories to be free from defects in materials and workmanship and to conform to HII's published specifications applicable to the products purchased at the time of shipment. This warranty does not cover any HII product which is (i) improperly installed or used; (ii) damaged by accident or negligence, including failure to follow the proper maintenance, service, and cleaning schedule; or (iii) damaged as a result of (A) modification or alteration by the purchaser or other party, (B) excessive voltage or current supplied to or drawn from the interface connections, (C) static electricity or electro-static discharge, (D) operation under conditions beyond the specified operating parameters, or (E) repair or service of the product by anyone other than HII or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by HII for the product at the time of purchase ("Warranty Period"). Any defective product must be returned (at purchaser's expense) during the Warranty Period to HII factory or authorized service center for inspection. No product will be accepted by HII without a Return Materials Authorization, which may be obtained by contacting HII. In the event that the product is returned to HII or its authorized service center within the Warranty Period and HII determines to its satisfaction that the product is defective due to defects in materials or workman-

ship, HII, at its sole option, will either repair or replace the product without charge, except for return shipping to HII.

EXCEPT AS MAY BE OTHERWISE PROVIDED BY APPLICABLE LAW, THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER COVENANTS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

HII'S RESPONSIBILITY AND PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT WITH NEW OR REFURBISHED PARTS. IN NO EVENT SHALL HII BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF HII ARISING IN CONNECTION WITH ANY PRODUCT SOLD HEREUNDER (WHETHER SUCH LIABILITY ARISES FROM A CLAIM BASED ON CONTRACT, WARRANTY, TORT, OR OTHERWISE) EXCEED THE ACTUAL AMOUNT PAID TO HII FOR THE PRODUCT. THESE LIMITATIONS ON LIABILITY SHALL REMAIN IN FULL FORCE AND EFFECT EVEN WHEN HII MAY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH INJURIES, LOSSES, OR DAMAGES. SOME STATES, PROVINCES, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

All provisions of this Limited Warranty are separate and severable, which means that if any provision is held invalid and unenforceable, such determination shall not affect the validity of enforceability of the other provisions hereof. Use of any peripherals not provided by the manufacturer may result in damage not covered by this warranty. This includes but is not limited to: cables, power supplies, cradles, and docking stations. HII extends these warranties only to the first end-users of the products. These warranties are non-transferable.

The duration of the limited warranty for the Hyperion 1300g is five (5) years.

A

Appendix A

Symbology Charts

Note: " m" represents the AIM modifier character. Refer to International Technical Specification, Symbology Identifiers, for AIM modifier character details.

Prefix/Suffix entries for specific symbologies override the universal (All Symbologies, 99) entry.

Refer toData Editing beginning on page 4-1 and Data Formatting beginning on page 5-1 for information about using Code ID and AIM ID.

Linear Symbologies

	AIM		Honeywell	
Symbology	**ID**	**Possible modifiers (*m*)**	**ID**	**Hex**
All Symbologies				99
Codabar	]F*m*	0-1	a	61
Code 11	]H3		h	68
Code 128	]C*m*	0, 1, 2, 4	j	6A
Code 32 Pharmaceutical (PARAF)	]X0		<	3C
Code 39 (supports Full ASCII mode)	]A*m*	0, 1, 3, 4, 5, 7	b	62
TCIF Linked Code 39 (TLC39)	]L2		T	54
Code 93 and 93i	]G*m*	0-9, A-Z, a-m	i	69
EAN	]E*m*	0, 1, 3, 4	d	64
EAN-13 (including Bookland EAN)	]E0		d	64
EAN-13 with Add-On	]E3		d	64
EAN-13 with Extended Coupon Code	]E3		d	64
EAN-8	]E4		D	44

	AIM		Honeywell	
Symbology	**ID**	**Possible modifiers (*m*)**	**ID**	**Hex**
EAN-8 with Add-On	]E3		D	44
GS1				
GS1 DataBar	]e*m*	0	y	79
GS1 DataBar Limited	]e*m*		{	7B
GS1 DataBar Expanded	]e*m*		}	7D
GS1-128	]C1		I	49
2 of 5				
China Post (Hong Kong 2 of 5)	]X0		Q	51
Interleaved 2 of 5	]I*m*	0, 1, 3	e	65
Matrix 2 of 5	]X0		m	6D
NEC 2 of 5	]X0		Y	59
Straight 2 of 5 IATA	]R*m*	0, 1, 3	f	66
Straight 2 of 5 Industrial	]S0		f	66
MSI	]M*m*	0, 1	g	67
UPC		0, 1, 2, 3, 8, 9, A, B, C		
UPC-A	]E0		c	63
UPC-A with Add-On	]E3		c	63
UPC-A with Extended Coupon Code	]E3		c	63
UPC-E	]E0		E	45
UPC-E with Add-On	]E3		E	45
UPC-E1	]X0		E	45

Add Honeywell Code ID				5C80
Add AIM Code ID				5C81
Add Backslash				5C5C

Postal Symbologies

Symbology	AIM		Honeywell	
	ID	Possible modifiers (*m*)	ID	Hex
All Symbologies				99
Australian Post	]X0		A	41
British Post	]X0		B	42
Canadian Post	]X0		C	43
China Post	]X0		Q	51
InfoMail	]X0		,	2c
Intelligent Mail Bar Code	]X0		M	4D
Japanese Post	]X0		J	4A
KIX (Netherlands) Post	]X0		K	4B
Korea Post	]X0		?	3F
Planet Code	]X0		L	4C
Postal-4i	]X0		N	4E
Postnet	]X0		P	50

ASCII Conversion Chart (Code Page 1252)

In keyboard applications, ASCII Control Characters can be represented in 3 different ways, as shown below. The CTRL+X function is OS and application dependent. The following table lists some commonly used Microsoft functionality. This table applies to U.S. style keyboards. Certain characters may differ depending on your Country Code/PC regional settings..

Non-printable ASCII control characters			Keyboard Control + ASCII (CTRL+X) mode			
			ON (KBDCAS1)		OFF (KBDCAS0)	
DEC	HEX	Char	CTRL+'X'	CTRL+ X function	Control Character Output Off (KBDNPE0)	Control Character Output On (KBDNPE1)
0	00	NUL	CTRL+ @		Reserved	Txt: [NUL]
1	01	SOH	CTRL+ A	Select all	NP Enter	Txt: [SOH]

2	02	STX	CTRL+ B	Bold	Caps Lock	Txt: [STX]
3	03	ETX	CTRL+ C	Copy	ALT Make	Txt: [EXT]
4	04	EOT	CTRL+ D	Bookmark	ALT Break	Txt: [EOT]
5	05	ENQ	CTRL+ E	Center	CTRL Make	Txt: [ENQ]
6	06	ACK	CTRL+ F	Find	CTRL Break	Txt: [ACK]
7	07	BEL	CTRL+ G		Enter / Ret	Txt: [BEL]
8	08	BS	CTRL+ H	History	*(Apple Make)*	Txt: [BS]
9	09	HT	CTRL+ I	Italic	Tab	Txt: [HT]
10	0A	LF	CTRL+ J	Justify	*(Apple Break)*	Txt: [LF]
11	0B	VT	CTRL+ K	hyperlink	Tab	Txt: [VT]
12	0C	FF	CTRL+ L	list, left align	Delete	Txt: [FF]
13	0D	CR	CTRL+ M		Enter / Ret	Txt: [CR]
14	0E	SO	CTRL+ N	New	Insert	Txt: [SO]
15	0F	SI	CTRL+ O	Open	ESC	Txt: [SI]
16	10	DLE	CTRL+ P	Print	F11	Txt: [DLE]
17	11	DC1	CTRL+ Q	Quit	Home	Txt: [DC1]
18	12	DC2	CTRL+ R		PrtScn	Txt: [DC2]
19	13	DC3	CTRL+ S	Save	Backspace	Txt: [DC3]
20	14	DC4	CTRL+ T		Back Tab	Txt: [DC4]
21	15	NAK	CTRL+ U		F12	Txt: [NAK]
22	16	SYN	CTRL+ V	Paste	F1	Txt: [SYN]
23	17	ETB	CTRL+ W		F2	Txt: [ETB]
24	18	CAN	CTRL+ X		F3	Txt: [CAN]
25	19	EM	CTRL+ Y		F4	Txt: [EM]
26	1A	SUB	CTRL+ Z		F5	Txt: [SUB]
27	1B	ESC	CTRL+ [		F6	Txt: [ESC]
28	1C	FS	CTRL+ \		F7	Txt: [FS]
29	1D	GS	CTRL+]		F8	Txt: [GS]
30	1E	RS	CTRL+ ^		F9	Txt: [RS]
31	1F	US	CTRL+ -		F10	Txt: [US]
127	7F	⌂			NP Enter	n/a

Lower ASCII Reference Table

Note: Windows Code page 1252 and lower ASCII use the same characters.

Printable Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
32	20	<SPACE>	64	40	@	96	60	`
33	21	!	65	41	A	97	61	a
34	22	"	66	42	B	98	62	b
35	23	#	67	43	C	99	63	c
36	24	$	68	44	D	100	64	d
37	25	%	69	45	E	101	65	e
38	26	&	70	46	F	102	66	f
39	27	'	71	47	G	103	67	g
40	28	(	72	48	H	104	68	h
41	29	)	73	49	I	105	69	i
42	2A	*	74	4A	J	106	6A	j
43	2B	+	75	4B	K	107	6B	k
44	2C	,	76	4C	L	108	6C	l
45	2D	-	77	4D	M	109	6D	m
46	2E	.	78	4E	N	110	6E	n
47	2F	/	79	4F	O	111	6F	o
48	30	0	80	50	P	112	70	p
49	31	1	81	51	Q	113	71	q
50	32	2	82	52	R	114	72	r
51	33	3	83	53	S	115	73	s
52	34	4	84	54	T	116	74	t
53	35	5	85	55	U	117	75	u
54	36	6	86	56	V	118	76	v
55	37	7	87	57	W	119	77	w
56	38	8	88	58	X	120	78	x
57	39	9	89	59	Y	121	79	y
58	3A	:	90	5A	Z	122	7A	z
59	3B	;	91	5B	[	123	7B	{
60	3C	<	92	5C	\	124	7C	|
61	3D	=	93	5D	]	125	7D	}
62	3E	>	94	5E	^	126	7E	~
63	3F	?	95	5F	_	127	7F	⌂

Extended ASCII Characters					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
128	80	€	Ç	up arrow ↑	0x48
129	81		ü	down arrow ↓	0x50
130	82	‚	é	right arrow →	0x4B
131	83	ƒ	â	left arrow ←	0x4D
132	84	„	ä	Insert	0x52
133	85	…	à	Delete	0x53
134	86	†	å	Home	0x47
135	87	‡	ç	End	0x4F
136	88	ˆ	ê	Page Up	0x49
137	89	‰	ë	Page Down	0x51
138	8A	Š	è	Right ALT	0x38
139	8B	‹	ï	Right CTRL	0x1D
140	8C	Œ	î	Reserved	n/a
141	8D		ì	Reserved	n/a
142	8E	Ž	Ä	Numeric Keypad Enter	0x1C
143	8F		Å	Numeric Keypad /	0x35
144	90		É	F1	0x3B
145	91	‘	æ	F2	0x3C
146	92	’	Æ	F3	0x3D
147	93	“	ô	F4	0x3E
148	94	”	ö	F5	0x3F
149	95	•	ò	F6	0x40
150	96	–	û	F7	0x41
151	97	—	ù	F8	0x42
152	98	˜	ÿ	F9	0x43
153	99	™	Ö	F10	0x44
154	9A	š	Ü	F11	0x57
155	9B	›	¢	F12	0x58
156	9C	œ	£	Numeric Keypad +	0x4E
157	9D		¥	Numeric Keypad -	0x4A
158	9E	ž	₧	Numeric Keypad *	0x37
159	9F	Ÿ	ƒ	Caps Lock	0x3A
160	A0		á	Num Lock	0x45
161	A1	¡	í	Left Alt	0x38
162	A2	¢	ó	Left Ctrl	0x1D
163	A3	£	ú	Left Shift	0x2A
164	A4	¤	ñ	Right Shift	0x36

Extended ASCII Characters (Continued)					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
165	A5	¥	Ñ	Print Screen	n/a
166	A6	¦	ª	Tab	0x0F
167	A7	§	º	Shift Tab	0x8F
168	A8	¨	¿	Enter	0x1C
169	A9	©	⌐	Esc	0x01
170	AA	ª	¬	Alt Make	0x36
171	AB	«	½	Alt Break	0xB6
172	AC	¬	¼	Control Make	0x1D
173	AD		¡	Control Break	0x9D
174	AE	®	«	Alt Sequence with 1 Character	0x36
175	AF	¯	»	Ctrl Sequence with 1 Character	0x1D
176	B0	°	░		
177	B1	±	▒		
178	B2	²	▓		
179	B3	³	│		
180	B4	´	┤		
181	B5	µ	╡		
182	B6	¶	╢		
183	B7	·	╖		
184	B8	¸	╕		
185	B9	¹	╣		
186	BA	º	║		
187	BB	»	╗		
188	BC	¼	╝		
189	BD	½	╜		
190	BE	¾	╛		
191	BF	¿	┐		
192	C0	À	└		
193	C1	Á	┴		
194	C2	Â	┬		
195	C3	Ã	├		
196	C4	Ä	─		
197	C5	Å	í		
198	C6	Æ	╞		
199	C7	Ç	╟		
200	C8	È	╚		
201	C9	É	╔		
202	CA	Ê	╩		
203	CB	Ë	╦		

Extended ASCII Characters (Continued)					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
204	CC	Ì	╠		
205	CD	Í	═		
206	CE	Î	╬		
207	CF	Ï	╧		
208	D0	Ð	╨		
209	D1	Ñ	╤		
210	D2	Ò	╥		
211	D3	Ó	╙		
212	D4	Ô	╘		
213	D5	Õ	╒		
214	D6	Ö	╓		
215	D7	×	╫		
216	D8	Ø	╪		
217	D9	Ù	┘		
218	DA	Ú	┌		
219	DB	Û	█		
220	DC	Ü	▄		
221	DD	Ý	▌		
222	DE	Þ	▐		
223	DF	ß	▀		
224	E0	à	α		
225	E1	á	ß		
226	E2	â	Γ		
227	E3	ã	π		
228	E4	ä	Σ		
229	E5	å	σ		
230	E6	æ	µ		
231	E7	ç	τ		
232	E8	è	Φ		
233	E9	é	Θ		
234	EA	ê	Ω		
235	EB	ë	δ		
236	EC	ì	∞		
237	ED	í	φ		
238	EE	î	ε		
239	EF	ï	∩		
240	F0	ð	≡		
241	F1	ñ	±		
242	F2	ò	≥		

Extended ASCII Characters (Continued)					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
243	F3	ó	≤		
244	F4	ô	⌠		
245	F5	õ	⌡		
246	F6	ö	÷		
247	F7	÷	≈		
248	F8	ø	°		
249	F9	ù	·		
250	FA	ú	·		
251	FB	û	√		
252	FC	ü	ⁿ		
253	FD	ý	²		
254	FE	þ	■		
255	FF	ÿ			

ISO 2022/ISO 646 Character Replacements

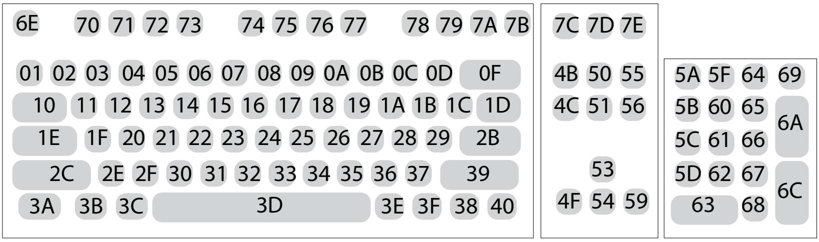
Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, select the code page with which the bar codes were created. The data characters should then appear properly.

Code Page Selection Method/Country	Standard	Keyboard Country	Honeywell Code Page Option
United States (standard ASCII)	ISO/IEC 646-IRV	n/a	1
Automatic National Character Replacement	**ISO/IEC 2022**	**n/a**	**2 (default)**
Binary Code page	n/a	n/a	3
Default "Automatic National Character replacement" will select the below Honeywell Code Page options for Code128, Code 39 and Code 93.			

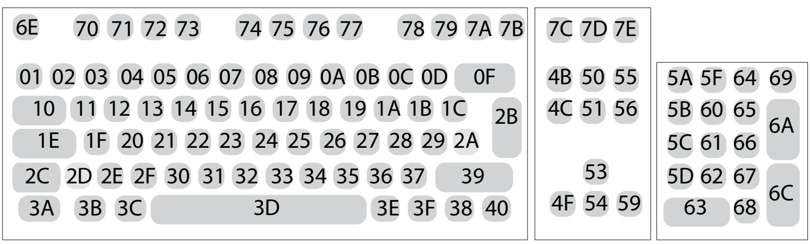
United States	ISO/IEC 646-06	0	1
Canada	ISO /IEC 646-121	54	95
Canada	ISO /IEC 646-122	18	96
Japan	ISO/IEC 646-14	28	98
China	ISO/IEC 646-57	92	99
Great Britain (UK)	ISO /IEC 646-04	7	87
France	ISO /IEC 646-69	3	83
Germany	ISO/IEC646-21	4	84
Switzerland	ISO /IEC 646-CH	6	86
Sweden / Finland (extended Annex C)	ISO/IEC 646-11	2	82
Ireland	ISO /IEC 646-207	73	97
Danmark	ISO/IEC 646-08	8	88
Norway	ISO/IEC 646-60	9	94
Italy	ISO/IEC 646-15	5	85
Portugal	ISO/IEC 646-16	13	92
Spain	ISO/IEC 646-17	10	90
Spain	ISO/IEC 646-85	51	91

Dec			35	36	64	91	92	93	94	96	123	124	125	126
Hex			23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
US	**0**	**1**	**#**	**$**	**@**	**[**	****	**]**	**^**	**`**	**{**	**|**	**}**	**~**
CA	54	95	#	$	à	â	ç	ê	î	ô	é	ù	è	û
CA	18	96	#	$	à	â	ç	ê	É	ô	é	ù	è	û
JP	28	98	#	$	@	[	¥	]	^	`	{	|	}	‾
CN	92	99	#	¥	@	[	\\	]	^	`	{	|	}	‾
GB	7	87	£	$	@	[	\\	]	^	`	{	|	}	~
FR	3	83	£	$	à	°	ç	§	^	µ	é	ù	è	¨
DE	4	84	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
CH	6	86	ù	$	à	é	ç	ê	î	ô	ä	ö	ü	û
SE/FI	2	82	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
DK	8	88	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~
NO	9	94	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	¨
IE	73	97	£	$	Ó	É	Í	Ú	Á	ó	é	í	ú	á
IT	5	85	£	$	§	°	ç	é	^	ù	à	ò	è	ì
PT	13	92	#	$	§	Ã	Ç	Õ	^	`	ã	ç	õ	°
ES	10	90	#	$	§	¡	Ñ	¿	^	`	°	ñ	ç	~
ES	51	91	#	$	·	¡	Ñ	Ç	¿	`	´	ñ	ç	¨
COUNTRY	Country Keyboard	Honeywell CodePage	**ISO / IEC 646 National Character Replacements**											

Unicode Key Maps



104 Key U.S. Style Keyboard



105 Key European Style Keyboard

Sample Symbols

UPC A

0 123456 7890

Interleaved 2 of 5

1234567890

Code 128

Code 128

EAN 13

9 780330 290951

EAN 8

654 3210 5

UPC-E

0 456123 8

Sample Symbols

Code 39

BC321

Codabar

A13579B

Code 93

123456-9$

Straight 2 of 5 Industrial

123456

Matrix 2 of 5

6543210

GS1 DataBar

(01)00123456789012

Programming Chart

K0K.

0

K1K.

1

K2K.

2

K3K.

3

K4K.

4

K5K.

5

K6K.

6

K7K.

7

K8K.

8

K9K.

9

Programming Chart

KAK.
A

KBK.
B

KCK.
C

KDK.
D

KEK.
E

KFK.
F

MNUSAV.
Save

MNUABT.
Discard

Note: If you make an error while scanning the letters or digits (before scanning Save), scan Discard, scan the correct letters or digits, and ***Save*** *again.*

Honeywell Scanning & Mobility
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